

STRATEGIES TO DEVELOP READING SKILL IN HEARING IMPAIRED CHILDREN AT HIGH SCHOOL LEVEL

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CHAPTER - I

READING AND ITS IMPORTANCE TO HEARING IMPAIRED

1.0. Introduction:

Education and welfare of the disabled has received a great thrust during the later half of the 20th century. The 1980's have seen an unprecedented awakening of interest in the disabled all over the world marked firstly by the United Nations Declaration of 1981 as the International year of the disabled persons (INDP) and subsequently by the proclamation of 1983-1992 as the decade of the Disabled, the motto of which was "full participation and equality". The World conference on special Needs Education held in Salamanca, Spain from 7-10, 1994 reaffirmed commitment to Education for all. "The concept of Inclusive school is an emerging trend which proclaims that children and youth with special educational needs should be included in the educational arrangements made for the majority of children. The same concept of inclusive schools is embodied in the underlining philosophy of the scheme of Integrated Education for Disabled children (IEDC) which is considered a major strategy for providing education to a vast number of disabled children in our country.

According to UNICEF, India has three hundred million children under 14 years of age have obvious disabilities. This means India may have about 15 million children requiring some educational assistance. Currently 50 to 60 thousand children receive education in about 1200 s

schools. Another 40,000 are in integrated education programmes, and about 50,000 students receive scholarships from various state governments. This means at the present time, Indian government is able to serve not more than 1% of the disabled children.

Rehabilitation of disabled has been included in the new 20 point programme. "Rehabilitation of all disabled by 2000A.D" is one of the goals in the VIII five year plan; the NPE programme of Action has envisaged coverage of hearing impaired children who can receive education along with others in general schools by 1990 and 11-14 years by 1995. Those who need education in special schools are to be covered by 2000 A.D.

It is envisaged that for the severe and profoundly disabled group special teachers may be continued till secondary stage, but for mild and moderate children special teachers may be discontinued after the Primary stage i.e about 8 years preparation should make it possible to dispense with special teachers. It is envisaged that educational services is extended on a priority basis for persons in the educational age group of 6-18 years with adequate pre-school preparation programmes.

On account of the scheme of integrated education for disabled children (IEDC), the need of the literacy skills for the disabled children are much more significant, if disabled children are to be successfully integrated. These literacy skills are much more important to hearing impaired children, when compared to others, as their natural way of

acquisition of language is affected due to hearing loss. Among the literacy skills reading and writing occupies prime place in the academic environment of the disabled child in general and hearing impaired child in particular.

1.1 Reading :

It was some three hundred and fifty years ago that Francis Bacon wrote "Reading maketh a full man, conference a ready man and writing an exact man. This aphorism holds good in 1990's also, even though our technological advances have brought in many new media of communication.

Reading unifies the related language arts of writing listening and speaking, What is written is read and what is read is discussed. Reading thus integrates and affects the nature and quality of oral and written language. Reading permeates curriculum and is a major source of knowledge in every subject field. Therefore instruction in reading should become an integral part of instructional experience in every subject.

Reading is an essential aid to personal development and social progress. It is an indispensable factor in modern culture interwoven with work, recreation and other personal and social activities of men and women. Towards "the learning society" is the goal of the educational endeavour of the developing countries. To achieve this goal an attempt should first be made towards a reading society, as a "reading society" can also become a "learning society".

Ashby (1911) refers to the invention of printing as the third revolution in education. With the onset of this revolution reading has gained the importance of being, if not the sole, but the significant single source of knowledge. Even the fourth revolution, the emergence of electronics, has not belittled the importance of reading as a means of gaining knowledge and has infact, necessitated the development of higher levels of and more varied ways of reading such as reading to scan, to select and to scrutize the printed or the projected plethora of material available for reading. Explosion of knowledge is taking place and new information is being flooded through very many media, and the reader is swamped with pieces of information that he/she has to process to understand and posses. Reading now has an extended connotation and include reading off the pages and off the screen as well.

For individual, intellectual equipment, for personal growth, for the development of advanced knowledge, social economic and even political growth and welfare of a country, reading directly or indirectly serves the means.

Havighurst (1941) says, Reading is a means of acquiring the cultural legacy and the pursuit and possession of the cultural tradition and is one of the developmental tasks of the young.

1.1.1 Reading, a cognitive process :

Reading is externally guided thinking (Neisser 1967). Readers must rely on the frame work (content), style set by

the author. In interpreting words, sentences and paragraphs, the reading must bring their previous knowledge to bear on new knowledge and to the task of integrating both.

The reading is an active information processor, reading to get information through tasks such as rehearsal, focussing attention, and problem solving (sticht 1978). Thinking, problem solving reflection and concept formation are activities that stimulate cognitive processes (Allen 1976). Cognitive and concept formation are activities that stimulate cognitive processes (Allen 1976). Cognitive ability in reading involves two processes the comprehension and interpretation. Comprehension is based partly on familiarity with and recognition of the modes of thought employed by the author of the material read. Interpretation applies to the reader's own modes of thought, to what he believes the author means, readers often differ in these two processes in methods as well as in levels.

The reader while processing information uses his\her own knowledge to construct own internal representation of the text through the principles of macro - processing such as generation, deletion, integration and construction. Comprehension processes involve both linguistic information from a particular problem statement, as well as general problem solving strategies. They are guided by various linguistic cues in paragraphs, such as connective pronouns, relative clauses, verbal coding speed and short term memory are basic to skilled comprehension. Comprehension also

depends on quick and effective encoding at various levels. The cognitive processes in comprehension are varied and their use is based on linguistic socio-linguistic and cognitive influences (Carpenter and just 1977).

Learning to read starts with identification and deciphering of graphemes, phonemes, and morphemes and this learning will help the reader to know and to some extent understand the content read. Learning is not simply knowing; it also includes the development of higher cognitive abilities. These can be developed through reading. He/she reads to learn, to learn higher cognitive abilities. Reading itself is a cognitive process and this cognitive process can be taken to higher levels. Reading then will be a means of learning higher cognitive abilities. Reading to learn implies moving to higher levels of reading from reading for comprehension, to reading for interpretation and inference. Creative reading is also possible when the readers learn information from the lines, through the lines, between the lines and beyond the lines read, and make use of the information in getting or saying something new that has not been expressed in the passage read explicitly or implicitly. 'Learning to read' therefore should cultivate 'reading to learn' if the reader wants to put reading to the maximum possible use.

1.1.2 Reading Strategies : The reader is as active in searching for meaning as is the writer in creating written language. The reader uses number of complex plans or

strategies. The significant strategies in the reading process involve predicting confirming and integrating. These strategies are used by all readers with varying degrees of proficiency, from the very beginning of reading. In most cases readers have no conscious awareness of their attempts to comprehend what they read. As readers, one uses one's own language proficiency and knowledge about the World to make tentative decisions. These are confirmed or disconfirmed through questioning the sense of the language. As one reads, one continuously adds to alters, organizes his\her meaning & thus expanding the universe of his\her knowledge.

1.1.3 Prerequisites to reading strategies : There is a clear relationship between the language and the meaning of the text. Students own language proficiency and his\her knowledge in the subject field or the content make the material predictable. When this reading material is presented as a whole and reflects its meaningfulness and use intensely, then the students will apply their accumulated language knowledge proficiency in the construction for meaning. In the process of constructing meaning the readers will make use of three language systems namely graphophonic, syntactic and semantic.

The closer the content of the reading material is to the life and experience of the students, and the closer the

concepts of reading material are to what students already know, the earlier it is for them to understand the meaning and relationships in the reading material.

Readers can predict, making use of their language experience in graphophonemic and syntactic information and in semantic knowledge. They can integrate what they are reading with what they know in order to comprehend the content read. The more context available to the readers the more support there is for understanding and comprehension.

Language system and reading strategies operate in an interrelated fashion. When readers are dealing with any one of the individual strategies, or focussing on any one of the language systems, all the other strategies and systems are still operating. Although proficient readers balance their use of reading strategies and systems are still operating. Readers balance their use of reading strategies and cueing system successfully,, beginning readers may need to be directed away of over reliance on one cue system and under utilization of the other reading strategies. With experience and guidance beginning readers learn to integrate all the strategies and cue system effectively and efficiently.

Good pedagogy suggests that the teacher prepare and motivate students to relate their background of information, introduce significant or troublesome vocabulary, help set purposes for reading, allow them time to read, to process information and to extend or enrich the topic. This is what

is termed directed reading. The teacher should know when to back off and allow students to try out their own strategies.

Reading has intellectual cultural, social and even economic values if developed at higher levels. The components of language syntax, semantics, pragmatics and graphophonology - are mutually interdependent. Therefore observation of one necessitates attention to the others. Wardbaugh contends that the reader uses visual cues of spelling knowledge of probabilities of occurrence and contextual pragmatic knowledge and in syntactic and semantic competence to give meaningful interpretation to the text (p.133). Thus reading is a complex linguistic activity highly dependent on a child's overall language ability, cognitive functioning, and experience and knowledge of the world. In the mastery of reading, children employ all the components of language as they occur in written language format (Wischer 1976).

1.1.4 Models of reading : Reading comprises of a variety of complex behaviours and processes that serve many functions for individuals and society. Albert Einstein is said to have observed that the task of learning to read is the most complex of all the tasks that humans have devised for themselves (Cram 1971) Most models of reading processes can be classified as bottom up models, top down models and interactive models.

In the bottom up models, reading is basically viewed as translating decoding and encoding process. In these models

the reader attends to letters, anticipates the words the letters will spell, and identifies the words with further expectations as to how they will string together, and what they will mean when assembled into phrases and sentences. Reading comprehension in the bottom up models is essentially viewed as an automatic outcome of the accurate word recognition. An underlying assumption of the bottom up model is that readers predominantly use a speech based code to access meaning from print.

Most of the top down models of the reading processes are based on psycholinguistic concepts involving interaction between thought and language. The readers cognitive and language competence play a key role in the construction of meaning from printed material. Reading, in a top down model, is viewed as a dynamic psycholinguistic process by which a reader extracts meaning from a message presented in graphic form. The reader samples selectively from the text and formulates a hypothesis about the meaning (Goodman 1976).

Interactive models claim that bottom up and topdown processes occur simultaneously for skilled readers. Good readers perceive reading as a form of communication, that is, they sense that there is a story or a message being presented to them, and they use searching type behaviour to understand what is happening or what is being expressed (Jones 1982). The reader's knowledge of syntactic and semantic constraints along with the natural redundancy of language, help the reader to formulate a viable prediction

which is confirmed or denied as the reader continues to process the written material. Smith (1978) suggested that two kinds of information facilitate the reading process. The visual information, which is the written word and the non visual information which is the knowledge already present in the readers cognitive store. The reader must learn to make full use of both forms of information in order to comprehend written language effectively. (Hammerneister, Irsraelite 1983). Thus the graphic information in the text and the information in the readers mind both are important in describing interactive models.

1.2 Dynamics of Reading skill: Reading with comprehension means thinking. Thinking is a complex, internal process. No direct assessment of thinking therefore, is possible. But we can conceive of different levels of thinking adapting Bloom's taxonomy of cognitive domain. Smith (1967) speaks of such a classification of the levels of comprehension. The cognitive processes involved at each level of reading are at literal comprehension, only memory and translation are involved, at interpretive level, cognitive process of interpretation and application are involved. For creative reading corresponding level in Bloom's categories is not given. The classification of reading skills by various authors' though differ in their labelling, they mainly refer to the following four levels of reading (Harris Smith, François Robinson 1970, Bloom Barret 1968, Barret 1966, Gray Robinson 1960, Walcutt 1967, Hecker 1968.

1.2.1. Literal Comprehension : To comprehend passage one requires at least three abilities. The ability to observe and use the different relationships of ideas, the ability to set specific purposes in reading, and the ability to make full use of previous learning in attacking the new material. In literal terms of Niles (1963) this means simply listing the ideas and or arranging them chronologically.

1.2.2. Interpretation : The reader reads between the lines at the interpretation level and reacts to the ideas expressed in the passage. According to Niles (1963) this means observing comparison, contrast relationship or cause and effect relationship. The ability to observe one or more of these relationships is comprehension skill. The perception of a specific purpose in reading facilitates comprehension. Associational reading, that is reading making full use of the backlog of real and vicarious experiences that one possesses makes reading more meaningful. Niles calls this ability reading readiness in an extended form. All these observing relationships, perception of purpose, associating-means reading between the lines and reacting to the ideas expressed in the passage. For literal comprehension and interpretation, these three abilities are required-observe, use and set purpose. Teachers have to help students develop these abilities by pointing out the thought relationships in the passage, making students aware of the purpose of reading and.

also focussing their attention to related ideas they already know. Comprehension becomes quicker when students learn to skim and to scan; Skimming is meant for getting a general ideas of selection of what a book is about and scanning helps to locate specific information.

1.2.3. Critical Reading:

Reading is at the critical level when one reads beyond the lines and infers, hypotheses, predicts or judges, critical reading is closely related to critical thinking. Critical thinking involves the exercise of the power of reaching a conclusion.

DeBoer (1946) describes critical reading as reading that "involves the search for relevant materials, evaluation of the data, identification and comparison of and the synthesis of findings. It involves the capacity for suspended judgement, and the interpretation of the writers motives. Critical reading is judging the veracity and validity of the material read. This judgement is based on sound criteria developed through previous experience. Robinson (1966) in her paper presented at the first International Reading Symposium, points out that to become a critical reader requires competence in the basic skills and abilities in word perception and comprehension, an inquiring attitude, a background of information about the topic, ability to weigh evidence while one suspends judgement and understanding or control of one's biases.

1.2.4. Creative Reading

Creative reading extends the reading selection and rearranges the ideas obtained into new thoughts and fresh ideas. In creative reading it is especially important that one thinks about the many possible uses of information one is reading. Creative reading transforms the reading material, into something highly personal. It fosters divergent thinking, about what has been read. The creative reading group had to think of new possibilities suggested by the statement of the problems; other possible hypotheses, better methods of collection of data, possible conclusions and interpretations of the findings, and an appraisal of the possibilities stemming from the findings (Torrence and Harmon 1961).

Thus there are four levels of reading. The first two levels of literal comprehension and interpretation are of the lower order and the other two levels belong to the higher order the four levels arrange themselves in a hierarchy on the comprehension continuum. Literal comprehension simply grasps the ideas, interpretive reading reacts to the ideas in the passage and in critical reading and creative reading new ideas are produced based on the information read.

Critical and creative reading require the exercise of higher level thought processes. Questions that probe cognitive abilities at higher level will demand higher comprehension skills. Therefore the teachers, by setting

questions at higher cognitive levels can help the students rise higher in their reading comprehension level.

If the reading is to be raised to its highest level in students, then they will need a programme of instruction based on the following purposes in mind-the development of comprehension aimed at promoting thoughtful reflective reading, the ability to vary reading techniques according to the type of reading material and the purpose for which reading was undertaken, the improvement of reading speed and the ability to vary the speed according to the needs of the situation, the ability to interpret specialist subject material.

But reading abilities in general and high level reading abilities in particular are influenced by many factors such as attitudes, motives interests, curiosity, anxiety, classroom atmosphere, child's background, teachers sensitivity to the group, emotional problem etc.

1.2.5. Attitudes

Attitudes denote bias, preconceptions, feelings, emotions, hopes and fears. They form the emotional screen through which one views the world. Attitudes and emotions are closely related. One's feelings, attitudes, as well as intellectual abilities affect one's reading abilities as well as critical reading abilities. Attitudes provide with a personal outlook on the World through one's own feelings, biases, inclinations, preconceived notions, ideas, fears,

threats and convictions making each person's view of the world different from everyone else which in turn affect his judgement or evaluation in critical reading. Negative attitudes are influential than positive attitudes. Attitudes affect reading at the perception level by helping to determine words as one actually see, at the understanding level of selecting those things that will be remembered and those that will be forgotten. readers go beyond the identification of stated ideas and facts, and engage in interpretive and evaluative thinking as they read. This makes them particularly susceptible to their own emotions, prey to their own attitudes. People differ in reading performance as much because of variations in attitudes, as because of variations in intelligence. The child's reading ability is influenced not only by his own attitudes but by the attitudes of his parents, teachers and the community he/she lives in.

1.2.6. Interests

Interest in reading increases reading skill, promotes reading habit. Pupils enjoy the results of reading when reading is built on their interests and needs. If they are not interested in reading especially, critically, they will not and cannot utilize their own potentials in critically evaluating the material they read. Considering students' needs in selecting topics for critical reading is one way of developing interest in students to read critically. Using varied kinds of students and teachers' own experiences and

ensuring understanding and enjoyment through reading promotes and sustains interests: Wherever possible students efforts to read critically should be encouraged and guidance given with positive attitude towards the problems students face, whenever they feel any difficulty or try to withdraw for any reason.

1.2.7. Motives:

Motive is an aroused state of an individual. Motivation promotes reading skill. There are three areas of motives that may effect reading achievement. They are (1) The motives the child brings to the school with him/her from environment e.g : socially disadvantaged child often comes to school poorly prepared to learn to read because there has been little preparation or interest in reading at home (2) The motives and attitudes that the child forms as he\she learns to read during the six or seven years while he\she is being taught complex reading skills. Repeated failures in reading during this period forms failure threat-anxiety syndrome resulting in negative attitudes toward reading skills. (3) Teachers and school attitude toward learning - these are very subtle and sometimes 'sub conscious' feelings and expectations about the child that the teacher and the school hold will highly influence the performance of the child. If the teacher has positive attitude towards the child, he or she makes the child learn by various methods, will not leave the child until he\she

learns. If she/he has negative attitudes that the child won't learn, as all his\her attempts are influenced by his\her negative attitude and assumption that the child is not capable of reading.

Thus these three motives are much more important than the reading methods and materials used with the child. Given good motivation in all of these areas, that is, environment personal and teacher related attitudes, almost any reading material can be used successfully.

1.2.8. Curiosity:

Curiosity is conducive to good progress in reading. Curiosity of children is curbed when the child's questions are ignored, curbed, or laughed at for its ignorance or wrong conception. If the questions which are the central tool of critical reading are curbed the child is devoid of opportunities to develop his\her thinking abilities. Informal round group structure in the classroom facilitates and reinforces curiosity.

1.2.9. Anxiety:

Anxiety reduces curiosity and also affects academic achievement. The way in which a teacher or parents answer children's questions may be more important in the development of children's personality than the actual answer itself (Sarason, Davidson 1962). Anxiety may r from lack of achievement, over demanding parants

from the peer group over protective parents and so on. curiosity is the basic factor that develops attention, keen observation, thinking and questioning abilities which are essential to reading. This curiosity is reduced if anxiety ridden situations were created to children for various reasons and thus affect their thinking and reading ability.

1.2.10. Classroom Atmosphere:

Openness of mind and free expression of the children are hindered when there is an emphasis on only right answers, punishing attitude towards mistakes committed by the students in a class room situation and this results, in silence in most cases which obstructs and stagnates childrens' thinking abilities. Free and open classroom atmosphere without the fear of punishment and mockery facilitates reading skills.

1.2.11. The child's Background Experience:

The child's knowledge of the topic, his\her chances of making sound judgements, his\her concepts, clarity of thinking will influence the child's reading. the lesser the child knows, experiences, the narrower will be his\her thinking capacity and biased will be his \her reading.

1.2.12. Teacher's sensitivity to group needs:

Teacher must perceive the needs of the group in order to judge the number and variety of experiences for the development of meaningful concepts. Thus a pe

background experience, his\her biases, prejudices, hopes and predispositions determine his\her interpretations of any kind of communication. Therefore the teacher must be sensitive enough to focus on childrens' biases, and prejudices for fair thinking and critical reading.

Thus, when students are well motivated through favourable attitudes, given topics of interest and of need, stimulate their curiosity in a favourable classroom atmosphere with teacher's sensitivity to children's background experience and biases, the chances of their developing reading skill or higher level reading abilities are greater than when they are prone to anxiety disinterest, indifference his\her chances of developing their reading ability are rare and in such emotionally obstructive circumstances.

1.2.13. The Role of a Teacher in Developing higher levels of reading:

The teacher plays a crucial role in developing higher levels of reading in students. Some of the ways in which he\she can effectively carryout his\her role are (1) To capitalize on the students individual differences in background and outlook and thus lead to different interpretations of the same story (2) to form individuals with differences as a group to instigate reading with curious attitudes (3) to utilize the communication structures and norms of the group to reinforce the

in reading. (4) to permit controlled forms of acting ones reactions to stories (5) to be alert to the factors that can block individual's progress in critical reading (6) to be sensitive to the kind of experiences the group has got. (7) to allow time to reflect and discuss (8) to utilize errors for discussion (9) to spend sufficient time and effort to plan the programme according to the needs, background experience, intellectual ability of the students. (10) above all, to have knowledge of reading process and psychology of reading development and how to develop it in the children.

1.3 Reading instruction to hearing impaired children :

Reading is an essential skill to develop for hearing impaired students . It is their primary means of gaining information from society in general. Yet it is an area of great challenge to teachers of the deaf, since hearing impaired students all frequently learn to read at the same time that they are acquiring language. Consequently the teachers task is a complex one.

Despite the seemingly poor performance of hearing impaired students in reading' research (North and Stevenson (1975) indicates that reading is the most efficient and effective method of obtaining information for this population. In order to learn to read, students must see ways of employing reading to further their own aims and interests. It is assential that a teacher should make reading a meaningful, enjoyable, useful and frequent

experience for the students. There is no one best method of teaching reading. Therefore, information regarding a variety of reading methods and materials have to be understood. The successful teachers are one who analyses selections and decides on appropriate instruction strategies based on the demands of each.

While phonic approach to teaching reading, interactive language development teaching, language experience approach, reciprocal teaching, delayed reading instruction are some of the approaches to beginning reading, predictable books, basal reading series, high interest low vocabulary method, individual reading approach, whole language approach, story mapping, paired reading "getting over the hump" functional reading are some of the reading approaches at elementary level. Sight words and phrases, vocabulary instructions, semantic mapping, context analysis, using additional resources are some of the techniques used for developing vocabulary. (Luetke - Stahlman and Lucker 1991).

Hearing impaired students depend more on formal instruction than do hearing student since they are less likely to have access to the incidental learning that is continuously available to hearing students because of their auditory link to society. (Dericle & Aldersley 1988). What teachers say and do in the classroom has a critical effect on student learning. Englert (1984) pointed out that an important teaching function related to student learning and student attention to academic tasks, classroom environments

that were characterised as cooperative on academic tasks, warm, democratic, convivial, and with high level of student responsibility for academic work proved positive predictors of achievement (Berliner 1980, Fisher et al 1978).

In addition, research by Wong & Le Mauve (1982) indicates that knowledge of the goal and the criterion for success on an assignment has a critical effect on how much special education students learn. Concomitantly, research reported by Moog and Geer (1985) with hearing impaired students indicates that intensity of instruction and increased teacher effort can make significant difference in the academic achievement levels of these students. If hearing impaired students are to make adequate progress, teachers must use systematic instructional procedures and manage the classroom environment so that students are engaged in academic tasks that are functionally relevant and provide adequate academic practice. Understanding and implementing the components of effective instruction will help the teacher meet the needs of his/her students and enhance his/her feeling of accomplishments.

Providing effective instruction in reading to children in general and hearing impaired children in particular is the basic means of acquiring knowledge of the World to everyone and much more so for hearing impaired children owing to their auditory deficiency.

Knowledge of words is a critical factor related to success in reading. (Jonson, Toms Bronowski & Pittelman 1982) comprehension of a passage cannot occur until the reader identifies the author's chosen words and recognizes interrelationship among those words, and attaches meaning to the word combinations (Johnson and Pearson 1984). Research reported by LaSasso and Davey (1987) indicates that hearing impaired students vocabulary skills are an effective predictor of their reading comprehension. Therefore one of the major tasks facing teachers of hearing impaired students is the expansion of students knowledge of words and their meanings. Students must be exposed to new words in a meaningful context, they must discuss the words so that expressive vocabulary develops; they must read and write the new words. Students should come to understand that they are learning new words, not as an end in itself, but as a means of becoming more capable in communicating.

The knowledge that readers bring to the text is a significant factor in both the quality and quantity of their recall and retention (Parestore and Indriseno 1987). Classroom applications have revealed that students who prepare for reading by relating background knowledge to both specific content and structure of the reading material improve their comprehension. (Hansen and Pearson 1982). A logical implication for teachers of hearing impaired students is that reading instruction should place an emphasis on developing the necessary background for all

reading. The importance of providing a stage for an instructional lesson cannot be over emphasized. In this stage, background information is related to existing knowledge, purposes for reading are determined, and significant vocabulary items are pretaught items (weed and Robinson 1983). Gormley and Franzen (1978) expressed concern that sufficient time was not being allocated for preteaching activities because they think that the poor reading performance of the deaf may be a failure of the educational process to teach the meaning of reading, making sense of written information in terms of the reader's experience (p.543). Inferntial questions, (May 1986) story frames, (Flowler 1982 meta comprehension (Fitzgerald, 1983, chariot and Mallery 1984) are some of the techniques that can be used for effective reading comprehension.

Thus, knowledge of vocabulary, along with basic comprehension strategies, is the key to understanding written languages (Johnson and Pearson 1984). The acquisition of new vocabulary words is based, in part, on the fact that comprehension is building bridges between the new and old that is, for new concepts to be learned, they must be related to concepts already known (Johnson; Toms Bronowski & Pittelman 1982). Taking the time to pre - t and review vocabulary in reading lessons provides a bridge between the ideas that are unfamiliar to students and knowledge that they have already acquired.

The point of concern is that to date there is dearth of research that demonstrates that isolated tests and workbooks on single isolated sub-skills will not help students to read better, on the other hand, there does seem to be evidence showing that comprehension can be improved when teachers use corresponding in-put (Luctke-Stahlman 1988) and teach comprehension in an integrated interactive way, with an emphasis on inferential thinking (carr 1983, Hensen, and pearson 1981).

1.4 Need for the study : As has already been explained reading is a powerful tool with which one can enrich his\her knowledge, understanding and modify one's out look and attitudes, and attain higher academic aim only if one possen reading ability in all its dimessions. Hearing impaired children require this tool more than others as reading is an alternative way of developing their language as well as knowledge of World. Research in this direction is quite lagging even in foreign countries. In India concern for special children was sensitized only in the recent past, especially after declaring the year of the disabled in 1992. As such research with respect to handicapped children in general, and hearing impaired in particular has not yet taken proper place especially research with reference to improvement of academic achievement in special children as well as hearing impaired is conspicuously lacking. As developing reading skills not only provides a means for improving academic levels of

hearing impaired children but also helps in improving their cognitive levels, this study is envisaged. As IX class is the penultimate stage for higher education, if reading is improved at this stage it would be useful for their further prospects. Hence class IX students were taken as the population for the study.

1.5 Objectives of the study :

1. To identify the reading levels of hearing impaired students in class IX.
2. 'To develop strategies to improve the reading levels of hearing impaired students in class IX using four school subjects.
3. To try out these strategies for their effectiveness.'

1.6. Limitations of the study :

1. This study is confined to hearing impaired students of class IX students in Andhra Pradesh.
2. The strategies identified are confined to students of hearing impaired students in Tirupati School only
3. This study is confined to three levels of reading namely reading the lines (Literal) reading between the lines (inferential comprehension (2) reading beyond the lines (Critical and creative reading).

1.7. Statistics used for the study :

In this study the scores obtained were treated with the following statistics - Mean, S.D, Percentages, 't' tests, Correlations, factorial analysis.

1.8. Chapter schema :

The first chapter gives the introduction objectives, limitations and statistics used. The second chapter reviews the related literature in aspects such as reading as a cognitive process, teaching reading, comparison of poor and good readers, factors affecting reading , methods and approaches to reading etc. The third chapter gives the methodology of the study in terms of sample, tools used, collection of data. Fourth chapter analyses the data in terms of descriptive, inferential, correlations and factorial statistics. The last chapter gives the summary of the finding, implications and suggestions for further study.

CHAPTER - II

REVIEW OF THE LITERATURE

2.0. Introduction :

Research studies take some direction while reviewing the related literature. There are two basic purposes for this review. The first purpose is to avoid any research that has already been taken place in the field in the aspects thought over by the investigator; Secondly to understand the dimensions of various aspects of the topic for better perspective of the research topic and for better design of the research. Research reviews also sensitizes the investigator with respect to constraints in the field chosen, types of research design undertaken, and finally results of these researches. All these aspects would sharpen the investigators understanding research in identifying the gaps in researches, needs of research in the field, problems of research design that would be tried. With this perspective a few studies were reviewed in the field chosen for better understanding, enrichment of knowledge and sensitization in research aspects.

2.1 Studies abroad :

Understanding reading with respect to text and language related factors teaching assessment and evaluation, comparison of normal and poor readers, normal and deaf readers would be essential for identifying tasks involved in

reading for developing strategies to improve the reading skills in hearing impaired students. Hence a few studies related to these aspects were reviewed.

2.1. Factors affecting reading in hearing impaired :

Developing reading skill is affected by various factors such as proficiency in language, home and school environment cognitive level of the students, reading processes, reading ability and intervention programmes. In this section twenty seven studies focus on text and language related aspects; five studies enlightens on home and school environmental aspects, seven studies sensitizes cognitive aspects, seven more studies touches on reading processes, four studies show relationship of oral language to reading ability and two studies throws light on intervention programmes. Thus totally 52 studies were reviewed in this section to provide direction to the investigator in her research study. However the review is not exhaustive. It is only exemplary for getting sensitization to the issue in question.

2.1.1 Text & Language related factors :

Various studies show that reading skills and reading comprehension is primarily influenced by language ability and text, and text related factors such as materials, syntax idioms, etc. A few studies in these aspects were reviewed for better understanding of reading skill.

Prutting and Elliot (1975) studied, "The rôle of syntactic structures and semantic features in a comprehension task" and showed that children acquiring language are affected by semantic cues such as status of the verb and features of the noun as well as syntactical structures in performing comprehension tasks. Lasky and Chagandy (1976) showed in their study on "Factors affecting language comprehension" that comprehension appears to be affected by the syntactic complexity, semantic familiarity, interaction cues, and ratio of presentation. Stick and Mutchie (1976) studied "syntactic versus semantic competency for the negative affix 'UN'" and showed that a notable improvement in comprehension of the negative concept occurred at 60 months of age. A study by Phillips and Pangalos (1978) entitled "The effects of contextual information on children's language" showed that context (matching and mismatching information) age, and sentence type (active and passive) significantly influenced comprehension. They also indicated that children between 3-7 - years actively use contextual information to comprehend known and unknown sentences. Doebring, Bonny Castle and Ling (1978) suggested from their study on "Rapid reading skills of integrated hearing impaired children" that assessment of components of reading skills is worthwhile in order to pay special attention to components of language skills appropriate to the hearing impaired. They emphasised that severely and profoundly hearing impaired children

require a continuous enrichment programme if they are to develop higher levels of reading skills essential for academic success in the upper grades of regular schools. They also observed that some skills seems to be acquired at a normal rate while others may require special attention.

Gregory's (1980) study on "Phrasing in the speech and reading of the hearing impaired" showed that deaf youngsters have difficulty affecting the transition, phrase reading that is common for hearing students at or about the 4th grade level. The author argued that this phrase sense can be instilled in hearing impaired students and that they can be trained to use it in reading. Robbin and Hatcher (1981) studied "The effects of syntax on reading comprehension of hearing impaired" and supported the hypothesis that reading difficulties of hearing impaired children are due to syntactic deficit rather than inadequate word recognition or knowledge of word meanings. Difficulty indices demonstrate that passives were more difficult, followed by relatives, conjunctions and pronouns substitutions, indirects and actives. Results were consistent with research on sentence comprehension in which word knowledge was not controlled. Brenza, Kriqqs, and Lasky (1981) studied "comprehension and production of basic semantic concepts by older hearing impaired children" and indicated that hearing impaired children did not develop age appropriate language comprehension skills as they grow. They suggested that educational materials need to be modified to compensate for

the language deficits of hearing impaired children and considerations should be given to child's comprehension and production skills of concepts on key vocabulary items used in both academic and non-academic stream.

Wilbur and Fraser (1981) found in their study on "Deaf students comprehension of English idioms" that comprehension of idioms were based on the reading level of the subjects, Linguistic factors which may affect idiom difficulty. A study by Shipley and McFurlane (1981) "Facilitating reading development with speech and language impaired children" and suggested the following points for facilitating reading development. They are :

1. Assisting children with the development of basic semantic, morphologic, syntactic and/or phonologic concepts.
2. Teaching redundancy for both oral and written language.
3. Ensuring opportunities for children to use short term memory to occur.
4. Assisting left to right progression and differentiation of graphic symbols
5. Utilizing auditory exercises as tangential, but not a major aspect of programme efforts.
6. Helping stimulates the motivation to read
7. Assisting the development of task attention.
8. Expediting risk taking and speed.

Gormley's (1982) study on "The importance of familiarity in hearing impaired readers - Comprehension of text" showed that subjects recalled familiar paragraphs better than unfamiliar one and they rendered more actual text information and more non-explicit information in retell responses. Stinson (1983) studied hearing impaired Adults", and suggested that varying the text word can influence the easy difficult continuum, for eg: the instructional materials might require the listener to repeat the sentence with the emphasis placed on getting the lost word correct (i.e text words). According to the findings of the study, sentences with specific words in the context would be easier than those with corresponding general words in the context. Wilbur and Goodhart (1983) studied, "Development of English in hearing impaired students". Results for will would, can could, may, might, should, have, to, and won't were presented. Comparison with DSS norms (Developmental sentence structure) for hearing children (Lee 1976) showed that DSS predictions of order of difficulty are only 14.3% correct and this low percentage of predictions indicate that DSS Norms for normal children cannot be applied to deaf children.

Fristoe and Cochran (1984) studied, "Deaf students comprehension of written English Tourmure idioms". Comprehension of literal meaning and figurative meaning (FM) of ten written English Tourmure in deaf children age 9-10

years was investigated. Figurative meaning comprehension remained at a chance level for all groups, although some 18 year olds indicated recognition idioms but not comprehension.

Nolen and Wilbur (1985) studied "Effects of context on comprehension of difficult sentences" and showed that a significant facilitative effect of context for relative clause sentences across reading levels. The author says that deaf children use contextual information while reading. By helping students learn contextual clues and previously acquired World knowledge along with syntactic information to obtain meaning from text, the teacher can foster a more efficient and productive reading strategy. Kemper's (1986) study on "Metalinguistic correlates of reading ability in second grade children" indicated that the ability to receive sentences may be associated with difficulties in initial reading ability. Lechner (1986) studied, "Recall scores after completing reading "cloze" or letter prediction tasks". The results showed that all groups (good, average, poor) of students recalled significantly more in the reading condition (read, one paragraph, predicted every 5th word in a second paragraph and predicted redundant letters in third paragraph LaSasso and Davey (1987) studied "The relationship between the lexical knowledge and reading comprehension for prelingually profoundly hearing impaired children". Results support the contention that lexical knowledge is an

effective predictor of reading comprehension performance for hearing impaired. Implications are a causal relationship between vocabulary and reading comprehension could be examined in a training designed to show the effectiveness of vocabulary instruction in reading comprehension performance. The author suggested a specific type of vocabulary instruction that can be effective in improving students reading comprehension.

Paynee and Quigley (1987) studied "Hearing impaired children's comprehension of verbparticle combination" and revealed that idiomatic meanings are more difficult than literal meaning. Subjects had the difficulty with syntactic patterns in which the particle is separated from the verb by a direct object. The easiest combinations appears to be one resembling a verb prepositional phrase sequence. The results suggests an order of difficulty for verb particle combinations among hearing impaired language learners. There is a need for teachers to clarify the ambiguity inherent in this grammatical structure. Dairymple and Shulman (1987) showed in their study on "Deaf school age children's comprehension of figurative language" that there is significant difference in figurative language comprehension and a function of chronological age and type of figurative language structure. Pring and Snowling (1989) studied "The Automaticism of context in children's reading" and showed that contrast to attentional context effects (Pring and Snowling 1986) the older readers showed

significantly more influence from the semantic context than the younger less proficient readers. This study suggested that teaching of reading needs to bring about a balance between the use of the two systems. While a proficient decoder does not as a general rule, need to make deliberate use of context, it is essential that he or she has automatic access to semantic information. Children sometimes described as 'hyperlexic' do not always read for meaning even though they can decode well (Healey 1982, Snowling and Frith 1986). It can be assumed that they have difficulty either with in the semantic system itself or else in establishing the links between the semantic and reading system which are postulated here. In contrast, children who rely too heavily on contextual cues may fail to develop an adequate decoding system; Wilbur, Good heart Futlera (1989) studied", comprehension of English modals by hearing impaired students". The poor performance of the hearing impaired students on the modal items in the study reportedly reinforced the argument that English syntax cannot be learned in isolation, divorced from pragmatic and semantic features.

Dooliby (1990) studied, " Adjunct questions in prose" A question position by Reading" Ability interaction" " and revealed that pre-questions yielded the highest learning performance for low ability readers. Post questions resulted in significantly greater learning performance for high ability readers. This study demonstrated that

importance of adjunct question locations in conjunction with post-secondary deaf students reading ability. Findings suggests a broader relationship between the position of various adjunct aid and the extent to which readers ability approximates or exceeds the difficulty level of the text. A more immediate pragmatic implication is that a readers learning of factual information might benefit from pro-adjunct questions when using challenging materials; however, post questions might be facilitative, when using materials which are of lower level of difficulty than reader's ability.

Rittenhouse (1990) study on "Figurative language and reading comprehension in American deaf and hard of hearing children: Textual interaction " suggested that figurativeness embedded in stories need not interfere with reading comprehension in severely hearing impaired children. The author suggests that teaching should focus attention on the teaching of figurative expression (trops) such as metaphor, similie, personification etc. rather than on the modification of textual materials. Gillian's (1992) study on "Print cue usage by pre-readers, beginning readers and experienced readers" showed that there is developmental progression towards reliance on graphophonic and pictorial cues. However these findings conflict with one tenent of whole language accounts of early literacy. Gallingham and Garne (1992) studied "Readers comprehension of Mazes embedded in expository texts. Results indicated that maze

is available diagnostic tool; it is easy and quick to administer and it suggests different reading strategies, and specific reading skill levels (Multiple choice extension cloze is called maze). Eugene's study on "A longitudinal study of the development of comprehension of language structure " suggested that the importance of utilizing comprehension data in language development programme. The author says that it is importance not only to expose the child to the syntactic properties of these sentence types, but also to the semantic and pragmatic properties. Earlier acquisition of the full range of syntactic structures is necessary to the understanding of multiple embedded sentences. This is particularly important to reading process and becomes essential as the child reaches higher levels of the educational system. Hearing children continues to develop understanding of the language structure into the adolescent years. Though the nature of language development is similar for ; hearing and hearing impaired children, the rate of development is significantly different. Language development program for hearing impaired should reflect these differences both in nature and frequency of exposure and in expectations for the continued development of skill such as reading.

Above studies focused on the textual context, linguistic structure exposure to language, language acquisition skills and abilities of hearing impaired children in the use of figurative language, position of

adjunct questions, understanding idioms, material difficulty etc which play a vital role in facilitating understanding in reading. These studies indicate, exposure to language is important for reading skill acquisition; linguistic ability, context, textual material, are need to be taken care of while developing reading comprehension.

2.1.2 School and home environment :

Some studies showed that reading skills and reading ability is affected by the school and home environment. A few studies in this respect are reviewed for getting some insights into this aspect.

Lane and Baker (1974) showed in the study entitled "Reading achievement of the deaf: Another look" that reading achievement is possible in deaf children if the deaf children have continuous education in the same school with emphasis at all levels of language development and oral communication in school and home. Bishop and Gregory (1985) studied "Book reading with mother and Teacher: Experiences of the young child" and showed that interaction styles of mother and teacher are useful for children. They experience and interchange with conversation with their mothers and prolonged enriched dialogue with teachers. The author says that though these conversation styles offer different opportunities, both are valuable as learning experiences. Mothers might, however, learn from teachers style, some

means of enriching dialogue without sacrificing child interest and participation and conversely teachers might learn from mothers some ways of involving the child actively in the conversational process.

Jean and Masson (1986) studied "How do deaf learn about pre-reading". A three level pre-reading model based on deaf children's early attempts at learning about pre-reading is proposed on a 9 month longitudinal study. This model contends that reading can be initiated by giving deaf children opportunities to match their internalized manual language to printed words. the recommended procedures stress the use of joint reading related activities involving parents, teachers, and peers. The class room experiments and parental interviews provide evidence to support this pre-reading model. A developmental sequence is defined for deaf children based on the students emergent pre-reading behaviours. Suggestions were also given for teachers and parents interested in promoting pre-reading young deaf children.

Kempfe and Turecheck (1987) studied, "Reading achievement of prelingually deaf students and its relationship to parental method of communication: A review of literature indicated that deaf children of hearing impaired parents typically function at higher levels of reading achievement than deaf children of hearing parents, but inconclusive evidence is available regarding the

relationship between method of communication used with deaf children and their reading skills.

These studies high lighted that language development of hearing impaired children is affected by home and school experiences. By implication these studies also indicate that reading of hearing impaired would also be influenced by home and school environment as developing reading skills is one aspect of language learning.

2.1:3 Cognitive aspects related to reading comprehension:

Cognition is basic to any kind of learning. Learning reading skills is no exception. A few studies which high lights the place of cognition and its related aspects in developing reading skill is herewith reviewed.

LaSasso and Savvidas (1985 study on "Issues matching test taking strategies used by hearing impaired readers in the united states and Greece" showed that Greek speaking hearing impaired students, when permitted to refer to text while answering comprehension questions make extensive use of visual matching test taking strategies. The strategy appears to be the same as that described by LaSasso (1980) used by English speaking students in the united States. This strategy consists of locating a word (s) in the words from the text which match words in the question stem and responding by writing words from the text which are in physical proximity to the word (1) matching word (s) (2) in the question. The instructional implications are that

teachers of Greek speaking hearing impaired students should be careful in determining that a correct response to a comprehension question reflects comprehension of the passage instead of visual matching. Further, teachers may wish to paraphrase in language of the questions to prevent visual matching. This holds good in the instruction of any hearing impaired population.

Berchin's (1985) study on Spontaneous comparative behaviour and categorization: The links between mediated interaction and "reading comprehension". The results indicated a positive treatment effect and indicate cognitive modifiability with the use of the mediated interaction for the cognitive form: The author suggested that academic learning might be enhanced in the future by using this special interaction to remediate the cognitive deficiencies necessary for academic learning. Davey and LaSasso (1985) studied "Relations of cognitive style to assessment of components of reading comprehension of hearing impaired adolescents" and concluded that cognitive styles of hearing impaired students appear to interact with certain assessment components in reading comprehension. The author suggested that sensitivity to these salient individual differences should aid practitioners, reserachers and test design specialist in their efforts to enhance the accurate measurement of the cognitive and linguistic competence of hearing impaired students.

Craiz and Gordon (1988) studied, "Specialized cognitive function and reading achievement in hearing impaired Adolescents". The results suggests that profoundly hearing impaired adolescents differ from their hearing peers in brain organization with a cognitive profile significantly skewed toward right hemesphere processing of the poor readers. This profile, in particular, appearars to be correlected with difficulties in reading comprehension; the performance of the better readers indicate that such a correlation is not inevitable. The author suggested that the instructional strategies need to be developed or adopted to make optimum use of the students but that, ordinarily, are not used in the verb sequential task of reading. Perhaps, instruction in sequencing, the cognitive strategies can, infact, aid poorer hearing impaired readers in making the transfer to the verbal short term memory requirements of reading.

Gibb's (1989) study on "Individual differences in cognitive skills related to reading ability in deaf " showed that deaf reader actually has much in common with the hearing reader. Both deaf and hearing readers have ; high reading, also carry a strong awareness of what is going on in the text that they are reading. They recognize errors and contradictions, they look for high truth value. In short they are metacognitively sophisficated. It appears teaching metacognitive skills will be productive in developing reading skills. Knowing what one do not know,

knowing what one can understand, and being aware of coherent and incoherent texts, are all critical components of reading skill. Sharpening these skills would place the deaf readers in a much better position to explore successfully the world of the printed text.

Swisher (1991) studied 'Visual reception of sign language in young deaf children. Is peripheral vision functional for receiving linguistic information' and showed that deaf children have the perceptual and cognitive abilities necessary to identify signs peripherally and suggested that at a minimum peripherally seen signs had a potential for distraction in the classroom because of their meaning for the students.

These studies on cognition show that enhancing cognitive abilities of deaf children would help in developing and improving their reading comprehension and reading ability.

2.1.4 Reading Processes :

Reading comprehension involves processing the text at various levels such as phonological, syntactic and semantic processing and also memory process for understanding a reading passage. In this section a few studies are reviewed which focus on these processes in deaf children.

Bernstein's (1979) study on "Another look at memory strategies in deaf signers indicated that word level stimuli may be translated in to signs during memory process. This parallels hearing readers conversation of written materials to auditory configuration. These findings suggested that native language skills may affect reading task.

Hanson and Fowler (1987) studied "Phonological coding in word reading. Evidence from hearing and deaf children" and indicated that access to phonological information is possible despite prelingually and profound hearing impairment. As such they run counter to the claim that deaf individuals are limited to the use of visual strategies in reading. Given the impoverished auditory experience of such readers, these results suggest that the use of phonological information need not be tied to the auditory modality.

Cooper and Arnold (1988) studied, "Hearing impairment and visual perceptual processes in reading". The hypothesis investigated was that reading retardation in hearing impaired children is in part to certain visual perceptual deficits known to be related to mechanical reading skills. It was found that the partially hearing school children showed deficit on all the visual tests of Frosting test, compared with the published norms for hearing children of the same age. It was suggested that this deficit in visual perceptual skills contributes to relatively poor level of reading attained by the partially hearing.

Rapala and Brandy (1990) showed in their study on "Reading and short term memory "The role of phonological processing", that there was a strong relationship between efficiency of phonological processes and capacity of verbal memory, supporting the hypothesis that reducing phonological processing requirements in verbal short term memory increases available resources for storage. Such relationship was found between phonological processing and non-verbal memory. This conclusion was supported by two findings. (1) The verbal short term memory deficit in poor readers significantly correspond with less accurate phonological processing and (2) developmental increase in verbal short term memory accompanied by more accurate and rapid extension of phonological tasks.

Stothard and Hulme (1992) studied, "Reading comprehension difficulties in children- The role of first language comprehension and working memory skills" and indicated that the observed comprehension difficulties are not restricted to reading. Working memory processes are not a major causal factor in the creation of comprehension difficulties identified in the present group of poor comprehenders.

Watson's (1992) study on "Auditory perception, phonological processing and reading "ability\disability" examined relationship among auditory perception, non-verbal temporal processing and speech perception, the major phonological processes involved in reading (short and long

term auditory memory, linguistic retrieval, and phoneme segmentation) and reading. Strong and significant relationships were confirmed between speech perception, and all the phonological variables except retrieval.

Kelly (1993) studied, "reading English function words and inflections by skilled English and average deaf readers". The results suggested that development of skilled processing of English grammatical conventions is an important instructional goal for children who are deaf as contributions of mastery of English conventions to reading competence cannot be dismissed regardless of how difficult they are for deaf children to acquire.

2.1.5 . Oral Language :

There are a few studies which showed oral language acquisition also facilitate developing comprehension and reading skill, A few studies which enlighten on these aspects are reviewed in this section.

Effects of task type and context on comprehension and usage of prepositions was a study undertaken by Stick and Nelson (1976) who revealed that comprehension was found to always precede expression regardless of context and indicated the need for developing oral language for developing comprehension skills. Definite directions for language intervention was indicated.

Permen's (1978) study on "Reading attainment in hearing impaired children. A comparison of lower and higher

achievers" revealed that oral language use was an important skill related to attainment in reading. The author also observed that differences in nature of early language experiences of children in the K.G.School were said to be partly responsible for the disparity in children's oral language ability and the differences in their later ability to read. The author says that the foundation of language at an early age might have given them motivation to explore the World and actively participate through books.

Maizono and Azuma (1985) studied, "The development of Reading abilities in hard of hearing children attending regular primary schools". This study revealed that the correlation between rapid reading and reading ability was higher than the others. Abilities to read short story rapidly and abilities that understand sentence and guess contents of the following sentence rapidly are the abilities similar to the abilities to understand the contents of running speech rapidly and guess about the relative situations or next topics. In actual life, pupils in the higher reading ability had communication ability through speech and could make fluent conversation with any one and in any situation; on the other hand, pupils in the lower reading ability did not have enough comprehension ability in communication and could not make smooth conversation with same persons in some situations. From these results the author suggested that to train the pupils auditory ability fully and bring up the abilities of understanding and

expressions through speech in lower grades lead to the development of the reading ability in the upper grades.

Robertson and Flexer (1993) studied "Reading development: A parent survey of children with hearing impairment who developed speech and language through the auditory verbal method". In this study parents of children taught through the auditory verbal approach were surveyed concerning their children's reading development. These children scored at the 50th percentile or higher on reading tests normed on hearing children. For these children hearing loss is not proving to be academic handicap. These authors suggest that residing also provides an articulation feed back systems.

The above studies show that oral language learning facilitates reading skill and reading comprehension in deaf children.

2.1.6 Intervention Programmes :

Intervention programmes are crucial for developing language skills in deaf children. A few studies which show certain intervention programmes helpful to develop reading ability are reviewed in this section.

The study of Roth and Kennedy (1988) on "Effects of intervention on acquisition of language comprehension strategies in children" indicated that intervention helped to improve acquisition of language comprehension strategies.

Serwatka, Iansson and Graham (1989) indicated in their study on "The effect of an indirect intervention system on reading achievement scores of hearing impaired adolescents " that hearing impaired children's reading achievement gain can be made by hearing impaired adolescents, even if they are labeled as poor readers. That means acceptance of the inevitable plateau does not seem to be necessary. This study revealed that inevitable plateau for hearing impaired need not exist, intervention programmes do help to develop their reading ability.

The above studies show that text, language, school and home environment, cognitive aspects, memory and phonological processes, oral language acquisition, and intervention programmes are all influencing factors in the development of reading comprehension and reading skills in hearing impaired children.

2.2. Teaching Reading :

Children may have potential abilities but the optimum benefit of these potential abilities will be realized only when these potential abilities are stimulated with appropriate opportunities at the right time, and drawn out with appropriate methods and materials. This is what teaching should do in a classroom situation. Reading is no exception. Children may have potential ability for reading. ~~Unless they are properly~~ taught to develop this ability, children may not reap its fullest benefit in their life

time. Teaching can be affected by the type of material, method or approach to teaching, training procedures and use of some programmes. Some studies in these aspects are reviewed in this section to sensitize one's thinking in this respect. Totally 43 studies were reviewed in this section. Five studies refer to relationship of teaching and materials, 20 studies highlight various methods and strategies undertaken for developing reading ability, six studies focus on various approaches to teaching reading, five studies showed some of the training programmes, six studies show some of the reading programmes developed for teaching reading. However these studies are not exhaustive. Only a sample was taken for better understanding of the study in question.

2.2.1. Materials :

Materials are basis for developing skills. Different materials require different reading abilities. If understanding is developed in selections of the material for developing reading skills, students would acquire necessary skills without much difficulty. Hence in this section a few studies focussing on the aspects of materials such as place of questions, visual cues, idioms, reading material were reviewed.

Peters and Peters (1974) studied, "Better reading materials for the content areas. Self evaluation of practices in teaching". The author says that dependence on

any one text as the sole source of reading material for a class or student is a poor teaching strategy. The author suggested a series of questions to evaluate the current activity of their choice and use written classroom materials. They are (1) Have you determined the reading levels of each student by using an informal reading inventory or a teacher made battery using classroom materials (1973 p. 376-77). The author believes that standardized instruments are not valid assessments at instructional reading level. (2) Do you provide for individual differences among students by offering a variety of materials and activities and by reassessing expectations (3) Are you text book bound? or making a course outline and then finding the books or chapters to supplement the content. The teacher selected materials appears to be advantageous than following a text book chapter by chapter. (4) Do you periodically evaluate your students' progress, use these evaluations to determine a students language and reading needs and redirect teaching efforts to accommodate them. This is very different from giving a chapter test, and continuing with the subsequent chapter regardless of the students obvious difficulties (5). Do your materials and modifications of them provide each student with meaningful learning experiences? (6) Are parents of your students made aware of the content as well as the language and/or vocabulary they can be reinforcing at home?

Crowell and Hupe¹Ann (1981) studied "A scale of questions to guide comprehension instruction". The levels used in this study are (1) Association questions at the lowest level of comprehension are designed to elicit from the child any detail of the story that she can recall. At this level the question asked was "What was this story about. A child was considered to have answered correctly if he\she provided any information from the story (2) catagorization questions at level-2 requires the child to make simple categorization. The child will be asked to classify a story chapter in a stereo-type manner, tell why classified the character as he did for eg: Did you like Anne Marie? why? why not. The child has to use information from the story to justify his response. (3) Seriation questions at this level deal with the interrelationships among details, such as cause and effect or the sequence of events. The child will be asked "What happened first? what happened next? and then what? A complete summary of the major events in the correct order. (4) Integration questions at level - 4 requires the child to combine the various elements of the story into a coherent structure not necessarily given by the story itself. The child may summarize the story or give main idea. The question was, 'what was the problem in this story? followed by a parallel question related to the specific story such as what problems did Nine have?' If the child has to respond correctly the child has to make interpretations, and support them with sound reasons (5)

Extention : At the highest level of the scale, the questions are intended to reveal whether the child can apply her understanding of the story beyond the confines of the immediate story structure. Such questions may call for the child to relate to the story to other stories of events, to change her ideas on the basis of new information or to use her ideas but with the content of the story as a starting point. Specifically, the question asked would be "Tell me another way this story could have ended. "A response can be judged correct if the child supplied a plausible alternate ending which draw upon story information in a reasonable manner, but was clearly different from the actual ending. Results of this study indicated that teaching with the scale of questions can help the teacher group children. In instruction the teacher can use the scale for guidance in asking questions about the story. She/he can work especially to develop a child's skill at the next level in the scale. The authors think that the scale of questions may be particularly useful, should be encouraged to use and develop their comprehension skills at a variety of cognitive levels from a very early age. In reading lessons that one part of a curriculum growing from the scale, the teacher may also ask questions at all levels appropriate to the story content. In this way, the children would develop skill in dealing with questions at levels beyond their present competence. Another useful procedure is to encourage the children to think about what they read in terms of the five questions. The scale then becomes a kind of internal

checklist that a child learning to apply automatically to each new passage. She/he reads, although she/he should, ofcourse acquire other approaches as well. The child gains confidence while reading because she/he has a strategy for thinking about new information.

Fruchter, Wilbur and Fraser (1984) studied, 'Comprehension of idioms by hearing impaired students and suggested that it may be possible to teach hearing impaired students idiomatic expressions at an earlier age than currently assumed, and that the methods for doing so may be similar to those used for teaching individual vocabulary items. Innovative techniques will be needed to determine how idioms are learned as well as which idioms or idiom types are learned. In this study the author tested the subjects with literal and figurative meaning picturization.

Bunce, Ryder and Rudger (1985) studied, " using the miniature linguistic system in teaching syntax. Two case studies". Two language delayed children received comprehension instruction on preposition object phrases using a miniature linguistic spoken format to structure generalization. Results indicated that generalizations were made not only to untreated two word combinations but also to production of two and four word phrases. In addition there was some generalization of production of two and four word structures.

Kepp (1986) studied "Reading across the curriculum Matching reading skills to reading materials". In this study the author says that the text books can be assessed for matching the reading ability of the class using cloze procedure. The system outlined is a useful means of testing the temperature of understanding and goes on insight into the interaction between readers and texts and throws some light on the extent to which the former understands the latter.

These studies suggest that use of questions scale, assessing students reading levels, and level of reading materials, innovative techniques and assessing materials through cloze procedure are helpful steps in developing reading ability in hearing impaired children.

2.2.2. Methods/Strategies:

Methods/Strategies are heart of any teaching procedure which makes one's effort to teach successfully or not. Methods/Strategies may vary according to individuals, subjects or even situation. Hence no one can assume any single method/strategy would be useful at all times, or for all people or even for all subjects. The more and more number of methods and strategies one is aware of, deeper and better would be one's understanding and insights. Hence it is crucial to review atleast a few studies related to this aspect for proper planning and execution of the study. In this section 20 studies were reviewed. 10 studies speak

about various methods, ten studies show a few strategies for teaching.

2.2.2.1. Methods of teaching reading:

Bryans's (1979) study on "Breaking the sentence barrier in language and Reading instruction" described how hearing impaired children may be taught in the context to question on a reading passage. The study concludes that the low levels of reading achievement poor writing skills prevalent among deaf children suggest that sentence centered language teaching does not automatically lead to proficiency with connected prose. Repeated presentation of a written passage with exercises designed to facilitate their comprehension, as well as illustration of the differences between reading and writing are suggested as possible means for teaching some of the skills and strategies which underlie the unaided comprehension of connected texts. Although the exercises described here were primarily envisaged as classroom activities in schools for the deaf, they might be usefully incorporated into the supplementary language teaching given to hearing impaired children integrated into regular classroom.

Schoenfeld (1980) studied, "Instructional uses of the cloze procedure" and feels that cloze is an effective technique for the instruction of specific reading skills, in addition to its more popular function as a test of rate and comprehension. Using a model of cognitive stage development

which progresses from concrete to abstract tasks the concept of closure can be introduced through nonverbal, manipulative materials. The concept should then be practised through oral recitation before it is presented in print form. The adaptation of print materials require careful structuring in the cloze procedure format; Instructional objectives need to be specifically defined and deleted words should directly reflect the reading skill to be learned. The type of clues to be provided if any, will depend upon the kind of support needed. The successful implementation of cloze exercises requires the students processing of syntactic and semantic clues simultaneously. Mastery of these processing skills provide the students with a powerful tool that can be used in any reading situation.

Mothner's (1980) study on, " Promoting independent study skills for the mainstreamed hearing impaired students" suggested the following steps to complete an assignment (1) The student should read the directions. (2) Ask themselves crucial questions (3) learn key words (4) Identify the study material and locate them (5) Read the table of content to locate the sections and chapters (6) read information quickly and briefly (7) follow SQ3R method-survey, question, read, recite and review (8) finally prepare the assignment.

Pressley, Levin and Miller (1981) studied, How does the key word method effect vocabulary comprehension and usage . The key word method of vocabulary learning involves

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Pressley, Levin and Miller (1981) studied, "How does the key word method effect vocabulary comprehension and usage". The key word method of vocabulary learning involves

forming a linkage between to be learned vocabulary word and a familiar English word that sounds like a part of the to be learned item of the key word. Then the learner form an interactive image between the key word and definition referents. In the previous research, the key word method has been found to facilitate students' recall of definitions, given vocabulary terms. In this study use of the method was also shown to increase comprehension of English in context, as well as usage of that vocabulary in a novel context.

Blatt (1982) studied "Teletext: a new television service for home information and captioning". The author says that new television technology is finally realizing the long awaited good goal of a home information system. In particular, one new service called Teletext promises to deliver a wide range of news, listings, engagements and other national and local information, because it is encoded in the television signal and transmitted continuously. Teletext can be displayed whenever the viewer chooses". Hearing impaired people may derive special benefits from this system through reading access to information presented in text and graphic form. Teletext also offers advantage as a program captioning system. European experience demonstrates that teletext is technically feasible while market tests currently under way will gauge consumer reaction. The design of the technology itself suggests that hearing impaired people can take advantage of teletext

on the same basis as fully, cheaply and immediately as the general population. "Literature on tape and hearing impaired listening while reading with Winnie the pooh and candide (1983)" is study in which listening while reading was shown as a convenient way for hearing impaired individuals to expand vocabulary and to improve speech and listening skills while enjoying literature. Educators, parents and hearing impaired themselves should explore the use of this method as an aid in the education and auditory training of the hearing impaired.

Lees and Chapmen (1982) studied "CATCHUP : A Computer mediated reading and language development scheme for children with language difficulties". The scheme seems ideal for use with children having English language problems with little if any general intellectual handicap. The scheme was tried with non-handicapped children for whom English is not a first language. Results were promising. Similar scheme has the potential for introduction into primary and secondary remedial departments and also for hearing handicap.

Grave and Rodde (1984) studied, "Receptive communication skills: comparison of four methods of communication". This study showed that the most efficient method of communication was found to be reading followed by total communication and manual communication oral methods were clearly least effective. The overall superiority of reading is further enhanced when the rate of information;

generated significant effects. Age and type of message also generated significant effects. Analysis of communication time suggests that the relative weakness of the oral technique. Results both from low signal\noise ratio and short term memory (STM) overall load, combining the oral and manual systems seems to create a more robust STM trace.

Koskiman, Wilson and Jenseme (1986) studied "Using closed captioned television in the teaching of reading to deaf students". The data indicated improvement in sight vocabulary, retention, student motivation and reading comprehension. Teachers indicated overall student satisfaction with the use of closed captioned television compared to regular reading instruction.

Yurkooski and Ewoldt (1986) studied, "A case for semantic processing of the deaf readers, " This is a case of one proficient deaf student reading two versions of the same story. One systematic more complex than the other provides support for the notion that a strong base enables processing at the syntactic as well as semantic level. The author says that exposure to pattern is not sufficient in and of itself. Teachers must supplement the child's acquisition of written language with appropriate intervention. Semantics can serve as a bridge for the readers in dealing with difficult syntax. Semantic processing depends on clear well written text and adequate back ground experiences field trips, use of media, role playing etc. One's experiences during reading often effect and enrich one's later experiences

(Whiten 1980) . The use of reading to build background and experience is an instructional practice well described for deaf readers. Using syntactically simpler materials as semantic building blocks can equip a deaf reader with the tools to approach a syntactically complex story.

Norris (1989) studied "Providing language remediation in the classroom. An integrated language to reading intervention method". The author says that techniques such as communicative reading strategies are advantageous because they enable language intervention to be provided within the classroom resulting in benefits to the child, the classroom teacher and the speech language pathologist.

McDonald (1991) studied, "Teaching metacognitive reading comprehension techniques to Gallaudet University freshmen". This course is designed around the assumption that reading is not so much a process of decoding a text as it is a process of constructing meaning by drawing together the readers relevant prior knowledge, the cues of the text, and its context predicting, questioning, summarizing and explaining are practiced within the context of two over-acting class activities. The multiple reading strategy and conceptual mapping or graphing, usually instructor led activities. "The primary activity of respondent in the paired work is cognition (the process of; constructing meaning) the primary activity of the monitor is meta cognition (assessing process, recognizing the breakdown in comprehension, and knowing enough about the reading process

to choose alternate techniques when comprehension fails. The intention of repeated practice is that students will internalize the activity, and be able to apply it to their own reading both in and outside this course. Instructors find this a stimulating course to teach. They see students taking a much active role in learning than in courses where cooperation is not encouraged. They also feel that the dialogue and collaboration with other instructors is enriching, and sustaining. As more and more instructors have the opportunity to practice meta cognitive comprehension techniques, it seems appropriate for the technique to be tapped in other studies across the discipline. Such continuity would give students a greater sense of the disciplines and would offer opportunities for faculty members to strengthen links of colleagues ability. Teaching this course has involved learning a new set of teaching behaviours and to support each other in this process. Instructors meet for atleast one hour a week, to discuss methodology practice, the techniques offered to students, share materials and develop tests.

2.2.2.2. Strategies for developing reading :

Frankmen & Henna (1976) studied, "Methods of training Deaf children to comprehend passive voice". At age 18, many deaf students have not mastered the passive voice. This research developed programmed training materials to teach deaf students this language structure. Two training

strategies were combined factorially with two orders of training. One strategy presented only passive sentences, the other also included active sentences: order of training refers to the sequencing. From reversible and truncated passive. Data were obtained from 120 deaf students. Significant learning and retention were demonstrated.

Hansen, (1981) studied, "The inferential comprehension strategy for use with primary grade children". Using a prereading strategy of this type helps students comprehend their stories as thoroughly as possible. It takes some teacher preparation time, but you will soon become adept in pre selecting some ideas from a story that may cause students difficulty. Also it quickly become apparent which type of personal experiences are related to the concepts. After a few stories, you will be able to jotdown some important ideas and the two corresponding questions for each one in very little time. An entire reading period for introducing a story is more than most of us normally set aside for this purpose. However teaching comprehension is so important that we can justify the extra time. Also children enjoy the introduction, the processes of relating. Personal experiences and predicting, stimulate their interest in the story.

Noble (1981) studied, "Selection : A remedial strategy for readers with a limited reading vocabulary. The results of this small scale study suggests that disabled readers are more to learn. Self selection is a motivational strategy that for many students can help them increase their reading

vocabulary. Buttiglia, Scoutun and Hand (1982) study on "A teaching strategy for writting intelligible laboratory reports has been found successful at the post secondary level. It provides the students with a way to bridge the gaps in their reading and writing in order to perform very technical and sophisticated laboratory work. It provides them with a key for unlocking some of the scientific usage that may be closed to them. Ultimately, it may help technical students to feel more secure in their chosen areas of scientific endeavour.

LaSasso '(1984) studied, "A modelling strategy for improving hearing impaired students' Comprehension and use of question form' This programme improved students' Comprehension, and use of question form'. The following guide lines are suggested (1) Students will be more motivated to participate if they know what is in the box is something that they would like to have, cones of soda, candy bars, and age appropriate magazines are good selections for the first few times. The mystery box is used on to (2) Praise students who try to use questions they have seen modelled even if the language used is not perfect. Students who modify questions that have been modelled should also be praised. Further more, all questions should be accepted as good ones, participation is valued and appreciated. (3) Write questions and answers on a transparency for all to see. This technique helps reinforce the printed form of the questions and helps children remember which questions have

already been asked. (4) Keep record of the question forms used by the various students; parents and teachers should reinforce new questions by using them in conversations. (5) Have other hearing impaired students with good questioning skill join the groups to model good questions. If there is no adult available, care should be taken to select children who are mature and sensitive to the feelings of other children. (6) Remember that this activity must be successful. Accordingly an unthreatening game like atmosphere must be established and maintained. The strategy need not be limited to order language handicapped students. It has been effective with students ranging in age from 4 years old to adults. Not only can it be a very enjoyable activity but it can also provide excellent practice in applying questioning and hypothesis testing skills which are integral to effective learning.

Mohr, Glover and Ronning (1984) studied, 'The effect of related and unrelated details on the recall of major ideas in prose'. The results suggested that the number of related and unrelated details had an effect on the recall of major ideas similar to that seen in experiment I, experiment 3 was constructed that readers were required to carefully process unrelated details in a categorization test. The results supported that recall is determined by the number of related and unrelated details and if directions were given to readers that required them to process unrelated details would influence recall.

Raynolds, Hussein and Richards (1990) in their study on "Strategies for mixed ability teaching with in English said that (1) The use of the staff's own philosophy and practice as a starting point (2) the use of information from in-class observation of both students and teaching approaches as the basis for offering practical suggestions (3) The staff commitment to mixed ability teaching and equality or opportunity are factors that contribute to the success of the mixed ability teaching. They are (1) Read it \tape it at a rate the pupils can follow (2) Discuss what has\already happend. Who the characters are (3) Suggest two or three questions as advance organizer before reading the text (4) Pre teach \ introduce any potentially difficult words first (5) Explain problems (6) Encourage reading for meaning, sentences need to make sense (7) Need to reread whole sentences after a hesitation\miscue in order to gain meaning from the context (8) If directed towards a sentence in a passage that holds relevant information, read the previous sentences out so that context is set (9) Note words that were not attempted or difficult for the pupils and teach them at the end of the passage, Draw attention to particular structure where relevant (10) give pupils opportunities for re-reading on tape so that confidence is gained by hearing themselves read more fluently (11) Some pupils may wish to read them gain meaning (12) Needs to gain fluency and confidence on less demanding material (13) Progress from direct questions initially where information can be found in the text.

"LaSasso (1990) studied "Developing the ability of hearing impaired students to comprehend and Generate question forms". The study discussed the diagnosis and development of students ability to understand questions and suggested strategies for these purposes. Journal writing, wait time, matching type were suggested. This study indicated that teachers must commit themselves to details, systematic instruction in comprehension and production of the various question form, and teachers should assume responsibility for ensuring that parents understand the importance of being able to comprehend and generate the various question forms. In addition, teachers should be sure, parents undertand that they can help at home by exposing their children to multiple question forms (and the appropriate responses, if necessary). Finally, teachers should communicate with question forms and they should reinforce parents in what they are doing at home. Parents and teachers working together can make a significant difference in this important area for hearing impaired children.

Wizer (1985) studied, "Encouraging reading through an enactive method. Strategies for hearing impaired children". This study suggests that enactive approach is flexible, directly related to recent experience, stimulates language development, encourages creating , focus on pragmatic and communicative function, allows flexibility in grouping, useful with a wide age range, it is one part of the total

language curricular, it can be vital component of integrated programming, allows cultural diagnosis and evaluation and it is a fun.

These methods and strategies indicate that effective planning, proper stimulation, effective implementation of good methods and strategies can draw out the potential of hearing impaired children and it is possible to develop reading skill in hearing impaired if appropriate methods & strategies are used in the appropriate contexts.

2.2.3 Approaches to Reading :

Approach refers to a philosophy or principles on which to base any method or strategies. Same problem may be approached in different ways and solution obtained. Based on the approach, procedures may differ. This approach provide us the basic insight into the ways and means of tackling the problem. Approaches are important in academic achievement in the sense they are foundations for methods to be adopted. Hence in this section a few studies were reviewed to understand various approaches to reading instruction.

Stauffer (1979) studied, "The language experience approach to reading instruction for deaf and hearing impaired children". The author says that working with dictated stories help hearing impaired children improve their ability to communicate. Obviously inability to use phonics and modality of sound does not prevent deaf children from learning to communicate through written language. This

appears to be especially true when instruction is based on meaningful communication through learner generated intentions and expectations.

Schanagal (1980) studied "Experiences and an approach to teaching reading to hearing impaired children". Language is a necessary pre-requisite to reading and therefore teachers of hearing impaired children must be aware of the language used in reading texts. In order for hearing impaired children to succeed in reading a very close connection between their experience and the language of a reading assignment must be established by the teacher. One way for a teacher to begin to meet a hearing-impaired child's inability in language comprehension is to make a "reading text analysis; once a Reader is analysed by the teacher, she or he can bombard the children, experiences appropriate to the concepts in the reading story. During these experiences, the language appropriate to the story should be used and recorded on an experience chart so that the children will eventually have to read. Primary variables which must be considered are different reading series used and varying language backgrounds and hearing levels of children with hearing impairments. The criteria this author used for selecting language from an analysis included (1) The difficulty of the language for a particular group of children and (2) The number of times the pattern appeared through out the book.

Erickson (1987) studied "Deaf readers reading beyond the literal". The author advocates a collaborative externally guided thinking approach to instruction that helps deaf literal readers learn to read at the evaluative level. A collaborative externally guided thinking approach used a teaching mode which initially guides deaf readers through the reading\thinking processes as they construct explicit and implicit meaning from the print. In this way, the deaf readers, come to associate interpretive reading with "Extended guided thinking". This collaborative approach also capitalizes on the actual course of cognitive development, which proceed not in rigidly defined steps or stages but in a spiral continuum that passes through the same point or skill at each new revolutions while advancing to higher levels of cognitive development (Vygotsky 1978, p.56). The author believes that many of the linguistic difficulties, faced by deaf literal readers reading beyond the surface structure of the text are minimized by the teacher or capable peers who use deaf readers - A bimodal interlingual format of instruction accentuates deaf readers awareness of meaning used by writers. To facilitate textual understanding, the evaluative, inferential reading comprehension act, among other things, is a culturally loaded, linguistic, metacognitive response to the printed word. The author advocates that deaf, at all levels, of reading instruction be exposed to advance comprehension tasks commensurate with the maturity of their thinking

abilities. Inferential and critical reading should be taught as natural externally guided thinking approach, the deeper meaning getting aspects of advanced reading thinking can be emphasized as we teach word analysis vocabulary, syntax and metacognition.

Johnson and Roberson (1988) studied, "The language experience approach. Its use with young hearing impaired students". Language experience has proved to be an effective approach to reading for young children. This study reveals that the language experience approach encouraged growth in vocabulary and writing skill as well as in self confidence and self esteem with kindergarden and first grade hearing impaired students.

Hammermeister and Israelite (1988) studied, "reading instruction for the hearing impaired. An integrated language Arts approach". the Mount Gravatt approach supports Hallidays' (1973) contention that children learn spoken language as they use language functionally. It provides more structure than used in many schools and classes for the deaf. In addition, it bases language and reading instruction on words and word sequences that young children commonly use, with a particular emphasis on function words rather than content words. If hearing impaired children learn written language through the realistic procedures outlined in the Mount Gravatt approach, their respective reading skills will develop more effectively than if they are presented with traditional materials unrelated to real

language usage. Young readers must gain sufficient satisfaction in reading in the short terms that will lead to competence and satisfaction for life time. Only through the integration of listening, communicating, writing and reading can hearing impaired children develop reading skills. This test can be used exclusively for hearing impaired children. The Mount Gravatt approach is recommended to the teacher of hearing impaired as a theoretical basis and a process for creating an effective reading program. With this view point, the Mount Gravatt approach can serve as one vital component in a total language arts program.

Dry and Evarle (1988) studied "Can Johnny have time to Read? This study says that one realistic means of exploring and preserving the positive impact of intensified free reading in the classroom may be to alternate between structural and holistic approach. Adaptation of a sustained silent reading (SSR) approach is an alternative to the strict structure bound model. Some ways of introducing reading time are (1) Alternate between months of traditional and sustained reading (2) Distinguish between browsing time and reading time (3) As students become involved in reading, have them tell you individually what they are reading (4) allow students time to find their own levels (5) Have students keep a simple record of reading (6) State broad reading goals openly.

In the above studies two studies support language experience approach, one advocate experience approach,

another study on externally guided thinking approach and one study focus on an integrated language arts approach, and the last one places emphasis on alternating between structural and holistic approach to develop reading skills. In all these things experience and meaningfulness of the sentence are key concepts for developing once approach to reading instruction.

2.2.4 Training in Reading :

Training is essential for developing any skill and it can not be dispensed with for reading as training gives practice and practice improves one's skill acquisition. Therefore to understand ways and means of giving practice, training programmes for developing reading were reviewed.

Jones and Gallois (1978) studied 'Effects of training with total communication or cued speech on language comprehension in hearing impaired children. "This study suggested that oral method aided by a partial manual supplement, the total communication method leads to better performance by hearing impaired children on language comprehension task

Hansen (1980) studied, "The effects of inference training and practice on young children's reading comprehension" Two experimental methods intend to improve inferential reading comprehension methods were investigated with second grade children. One method focussed on a pre-reading strategy in which children utilized previous

experiences to predict events in the up coming story. The second method provided practice in answering questions which required inferences between text and prior knowledge. The instruction was applied to ten basal reading stories. Four dependent measures compared the comprehension ability of the two experimental groups and a control group as comprehension questions following the instructional stories. The performance of the children in both experimental groups surpassed that of the control group children's. Standardized test scores and scores on an experimental groups, especially the group receiving practice in answering questions. A free recall measure produced no difference among any groups.

Grabe and Mann (1984) studied, "A Technique for the assessment and training of comprehension monitoring skills". More skilled and less skilled upper-elementary readers and college graduates played reading games in which they tried to determine if prose statements were internally consistent or inconsistent. The elementary students were assigned either to control conditions in which they played the pre and post test variants of the reading games in an effort to improve their comprehension monitoring skills. Ability group comparison indicated significant increase in monitoring proficiency. However, the training advantage was limited to an improvement in the ability to identify consistent statements. Several things the students develop monitoring skill

need to be shown how to cross reference a confusing sentence. With other sentences to determine if the difficult sentence has been correctly interpreted. Students would also be given concrete feed back by showing them the inconsistent sentences when they failed to label a contradictory statement or say inconsistent simply. But future efforts might more profitably rely upon more direct instructional approach.

. Swanson (1987) study on "The effects of selfinstruction Training on a deaf child's semantic and pragmatic production', showed that there was evidence to suggest self instruction was immediately effective on pragmatic behaviours, but such behaviours were reduced when another person administered treatment. In contrast, self instruction training has a gradual influence on semantic behaviours and those effects were maintained when treatment included a different person and setting. Implications of the clinical study were that the effects of self-instructional training may be useful tool for improving some deaf children's communication skills.

These studies showed that specialized training with total communication training question answering, comprehension monitoring skills, and self instruction training with semantic and pragmatic production found to be effective in teaching reading.

2.2.5 Reading Programmes :

A few studies were also reviewed to understand on going programs for developing reading in order to acquire insights into program development and program implementations.

Kennedy (1978) studied, "Effects of intervention on acquisition of language comprehension strategies in children "(Normal children)". The results showed highly significant main effects of testing period and training period indicating that intervention was effective confirming the major hypothesis.

Brown (1979) studied "Beginning Reading instruction with hearing impaired children". This study describes two experiments of beginning reading instruction with severely to profoundly hearing impaired children. Study one was intended to determine a minimum language level prerequisite for beginning reading with hearing impaired children. It showed that the children were reading with a language level below that generally considered a prerequisite for beginning reading. Study two, an experiment in introducing a beginning reading program showed that an adopted form of a commercially available beginning reading program could be successfully used for beginning reading with hearing impaired children. The overall conclusion was that numerical scores of language level cannot be the sole determinant for implementation of a beginning reading programme.

Store (1981) studied "Reading and cognitive development". One of the objectives of any reading is to teach critical thinking skills, study skills comprehension strategies etc. They are part of Tucker-Maxvis program, too but with a difference. These skills are viewed as being relevant to the total curriculum and the total child. Therefore their inclusion in the reading program is not viewed as a means to develop cognitive skills which are applied to reading process. The skill of classifying analysing, predicting, observing, summerizing etc , are used not only to arrive at comprehension, but also to develop those skills peculiar to the reading task, because, the skills have been utilized since the beginning, their application comes quite naturally. When children became high several grade or low third grade readers, they are introduced to a standard reading series. However, the language experience is always maintained to same degree as Piaget say that language does not constitute the source of logic, but it is, on the contrary structured by it (1969, p.90). With these words, Jeans Piaget makes clear the relationship between thinking and language development and reading. Building on this idea and the work of several others, the staff at Tukker - Mexon oral school in portland, Oregan, has developed a thinking skill oral language reading continuum.

Maxwell (1986) described a reading program in the article. Beginning Reading and Deaf children : This reading

programme is appropriate for the average deaf child without age level language abilities. It has a top-down element that makes use of telling stories and reading aloud and creating narratives from the child's experience with classmates, routines with picture books, functional literacy, and environmental print. It also has a bottom up component that deals with letter identification print concepts, letter sequences (spelling), and word recognition and the mode of communication. The program is designed to foster independence in the child.

Bannister (1985) studied "Home\School reading scheme for pupils in the primary unit for hearing impaired. "This scheme found to be successful and they recommended this to children of hearing impaired. This was based on the "Bal field reading project "which showed that (1) Properly organized parental help can lead to enhanced reading performance in children (2) it showed that parents are willing and able to help their children with reading at home (Haringary), Reading project by Weiss and Tizard (1980) indicated that critical factor in a child's early reading development is whether or not a child is regularly hear to read at home,

Moog and Geers (1985) studied, "Epic: A program to accelerate academic progress in profoundly hearing-impaired children "An experimental project in instructional concentration (ERIC) was undertaken in an attempt to develop an ideal educational programme. The purpose of the proposed

project was to determine the degree to which intensive and systematic instruction might accelerate the acquisition of reading language and speech production skills for a group of profoundly hearing impaired children. This programme demonstrated a significantly accelerated rate of progress. The primary feature of an Educational Program of Instructional concentration (EPIC) are currently being implemented in the CID school of more than 100 children. These include organizing children into homogeneous instructional groups of optimum size for each subject (b) flexible scheduling that allows for easy grouping and regrouping of children (c) hierarchy of skills in each subject area that are to be taught sequentially until each is mastered (d) a team teaching approach to staff organization.

Bannickson (1985) studied "a functional language programme that works. A pilot study" This experimental intensive reading programme involving six students age 10 to 12 produced dramatic language improvement. The author says that the standard learning model provides important elements in the language acquisition process for hearing impaired students as well as for normal hearing peers. The hearing impaired students should be seen as a beginning language learner regardless of their age. An environment conducive to language acquisition is necessary. This will at times, mean delaying fact giving until the student has had sufficient time in the special language learning environment

to develop a solid, automatic language base. Further language study as well as the learning of content area will be significantly improved and accelerated if students can be assisted in developing this firm base first.

These programs high lighted the role of parents, grouping, systematic organization, and experiences especially language experinces are crucial for developing effective reading programmes for normal as well as hearing impaired children.

Review of these studies in teaching reading indicate that teaching reading to children cannot be generalized. It should be situation learner and content specific. The teacher should have the novelty to adopt the means and ways of teaching reading according to the clientale in question. This is particularly important for hearing impaired students as their level of understanding language differ for various reasons such as degree of hearing loss, level of their reading, extent of exposure to language, communication method followed, need for learning opportunities to develop reading skills etc.

2.3. Assessment and Evaluation :

Assessment and evaluation are essential features of any academic progress. While assessment shows the level of performance, evaluation interprets the performance in terms of one's abilities or drawbacks. In this section studies reviewed which focus on these aspects to enlighten on

Smith and Beck (1980) studied, "Determining instructional reading level with the help of 1978. Metropolitan achievement tests (MAT)". The data reported here indicated a strong relationship among results of four procedures used for estimating instructional reading levels. For this sample, among the four procedures, the informal reading inventory yielded slightly higher reading level estimates and the cloze procedures, some what lower grade level. The MAT results derived from a standardized group administered test, compared most closely to the other techniques. Because of the high degree of convergent validity (Campbell and Friske 1959) the Metropolitan appears to provide an accurate estimate of students instructional level.

Wilbur, Goodhart and Montandon (1983) studied "Comprehension of 9 syntactic structures by hearing - Impaired". Results indicated a significant improvement across reading levels and allow the structures to be ordered in terms of difficulty for use controlled syntax reading materials and captioning. Nine previously investigated syntactic structures (Why questions, conditions, non-locative professionals, indefinite pronouns, qualifiers, modal verbs, elliptical constructions, reciprocal pronouns and comparative constructions) were presented to 187 hearing impaired students at reading levels 1 to 8. The use of

practices and possibilities of assessment and evaluation procedures adopted for hearing impaired children.

course book format provided pragmatically appropriate contexts in which to test comprehension of these structures.

Servtka, Hasson and Graham (1984) studied "The effects of indirect intervention on the improvement of Hearing-impaired students reading score". The effects of an indirect intervention system on reading achievement score, of hearing impaired adolescents were assessed. The results implied that for programs of hearing impaired children in reading achievement gain can be made by hearing impaired adolescents even if they are labelled as poor readers. Acceptance of inevitable "Plateau" does not seem to be necessary.

LaSasso and Davey (1985) studied "An examination of hearing impaired reader test taking abilities on reinspection tasks". The results of the study suggested that hearing-impaired students performance on comprehension measures when reinspection was permitted. It is not related to age but instead may be related to particular test taking strategies used by the students. This strategy observed by others in recognition (eg; multiple choice tasks) Wilson Kretschmer and Jenseme (1978) Wood, Griffith and Webster (1981)) involved finding a key word in the question, locating the same word in direct vertical and or horizontal alignment with the keywords. It may be that hearing impaired students performance on comprehension increased

when reinspection is permitted, is more a reflection of non-linguistic test-taking strategies than it is test comprehension.

Croft, and others (1985) studied 'Pilot investigation of validation of the modified learning and study strategies inventory (LASSI) for hearing impaired preparatory students at Gallaudet college". The results suggested that the validity of the adopted LASSI. An approach instrument for measuring the learning strategies repertoire of preparatory students at Gallaudet university. The preparatory students seemed to have problems with test-taking strategies, selecting important ideas, feeling of anxiety and attitudes. The PASS program and the preparatory curriculum need to focus on training the students to develop strategies in these areas. Regarding the special groups average reading skills, the adopted LASSI scores could predict poor readers who will need special intervention such as reading tutorial services that include learning strategies training.

Lechner (1986) studied 'Reading scores after completing reading "Cloze" or letter prediction tasks". This investigation determined if recall of printed paragraphs was improved by completing word prediction (cloze) or letter prediction tasks on a computer. The scores on recall tasks given after completion of each paragraph showed that all groups (good, average, poor) of students recalled significantly more in the reading condition (read one

paragraph, predicted every 5th word in a 2nd paragraph and predicted redundant letters in a 3rd paragraph).

Raynolds (1986) studied, "Performance of deaf college students: one criterion - referenced modified cloze test in reading comprehension". The author says that degrees of reading power (DRS) test offers a potentially valuable new tool for the assessment of reading achievement in deaf students. The modified cloze procedure with multiple choice response options provides a simple and direct measures of reading comprehension.

Israelite and Halfrich (1988): showed "Improving Text Coherence in basal Readers: Effects of Revision on the comprehension of hearing impaired and normal hearing readers. This article examined the effects of revision that improved text coherence in hearing impaired and normal hearing readers' comprehension of two syntactically controlled basal stories. Findings suggested that the efforts to control readability through stringent syntactic guidelines may result in texts that are more difficult rather than less difficult for hearing impaired readers to understand.

Spencer and Delk (1989) studied, "Hearing impaired students performance on test of visual processing: Relationship with Reading performance". Performance of hearing impaired students on selected tests of visual processing and the relationship between performance on those measures and on a test of reading comprehension were

investigated. Significant positions of the variance in reading scores were explained by I.Q, and performance on tests of memory for visual stimuli. Visual stimuli test without a memory component failed to explain significant portion of the variance in reading performance.

Wilbur, Goodhart and Fuctner (1989) studied, "Comprehension of English models by hearing-impaired students". The purpose of this study was to obtain data on the abilities of hearing-impaired students to comprehend several common English models. Results indicate significant differences among reading levels and among models. Poor performance of the hearing impaired students on the model items in the study reported here reinforces the argument that English syntax cannot be learned in isolation, divorced from its pragmatic and semantic features.

Braeges (1990) study on "The comprehension monitoring abilities of hearing impaired" showed that between 40% and 75% of the time in classes for hearing impaired students consists of a teacher talking and or signing to students. This study of profoundly deaf junior high school students found individual differences in students abilities to accurately monitor their understanding of teacher presented material and to seek clarification when necessary. Accurate comprehension monitoring skills were significantly correlated with standardized measure of academic success.

Implications for teachers communication were suggested by these findings.

Lawchen (1991) studied, "Questions in American language or English for assessing reading" The mean ASL scores were higher than mean English scores but were not significantly different for some subjects; questions in ASL provided another measure of reading skill.

Mayer McLain, Grindley and McIntosh (1991) studied "Value of a scale used to measure Meta cognitive reading awareness". The study concludes that the obtained Cronbach alpha coefficient of .61 was minimal and that the index of reading awareness should be used cautiously as a measure of meta cognition in reading. The adequacy of the scale acceptable if used as a total score and only as one measure of the reading process in a port folio assessment.

Gillighan and Garne (1992) studied "Readers comprehension of Mazes embeded in expository texts "Results indicated that maze is available diagnostic tool. It is easy and quick to administer, and it suggests different teaching strategies at specific reading skill level (multiple choice extension of cloze is called maze).

Bueckendorf (1992) studied, "Comparative assessment of reading comprehension using multiple-choice and written summary formats with assertive and expository texts: In this study the author investigated the effect that text type and

text format have of the reading comprehension construct measured by narrative and expository text and multiple choice and written summary text format. The study indicated that the multiple choice tests and written summary formats measure different aspect of the basic reading constructs. Yang (1992) studied " Orthographic variation and reading acquisition . The purpose of the present study is to provide experimental evidence for the relationship between orthographic variation and reading acquisition, Results of the error detection task indicate this as first graders are not confused by sound alike characters and detect the most errors in homophone form (3) seems more appropriate for skilled readers, since the skill to use both semantic and phonetic cues required of readers abundant knowledge in linguistics. The evidence that readers use form (3) again, derives from the results of the error detection task, in which fourth graders detect the most errors in phonetic\semantic compounds instead of in either word, shape or homophone form (1) Sound constructed by virtue of meaning (2) Phonologically mediated reading (3) a combination of 1 & 2.

These studies showed that cloze procedure, informed reading inventory, maze, reading index, a meta cognitive awareness scale, learning and study strategies are some of the assessment techniques used for hearing impaired population. These studies also indicate that assessment techniques could be useful not only for measuring the level

of student learning but also to plan for future programme with specific emphasis in the required dimension of reading for hearing impaired children.

2.4. Comparative studies (Normal and deaf)

Comparative studies of normal and deaf children would deepen one's understanding as to how to plan academic programmes for deaf children and also provide measures of deviation with respect to deaf childrens' learning or their difficulties. With this perspective a few studies were reviewed in this section.

Locke (1979) studied, "Reading in deaf" and showed that hearing children identified significantly more cases of a letter when it was pronounced than when it was silent. The deaf were equally accurate in locating pronounced and silent forms. The deaf also were relatively unaffected by the grammatical class of target words while the hearing were more likely to detect letters in content than in function words.

Sarachan-Deily, (1982) studied, "Hearing impaired and Hearing readers sentence processing errors". Hearing impaired people develop language skills later and in a different manner than hearing people do. Evidence from this study indicates that the hearing impaired develop syntactic patterns that differ from those used by hearing, but semantic patterns and processing abilities of the hearing impaired are similar to those of the hearing. The

development of early visual gestural system of semantic representation and implications for teaching reading to the hearing impaired are discussed. This study has documented that resulting - agrammaticisms" remain in hearing impaired students' written language despite varied teaching techniques, through the oldest ages tested (17-19 years). If hearing impaired students cannot eventually use the syntactic rules and endings to help process sentences, they cannot extract precise meanings from these sentences, and total comprehension is weakened. Too often, hearing impaired children are said to have a simple reading problems. Continuing efforts to develop the English syntactic rule systems of hearing impaired students should be made, especially in pre-elementary level to help make the perceptual characteristics of syntax salient for these children.

Quinn, Tomblin, Moellar and Osberger (1985) studied comprehension strategies of children with normal hearing and hearing impaired and normal hearing with language impaired. This data suggested that hearing impaired children rely on one strategy order of mention, more extensively than do the language impaired subjects with normal hearing or the normal language control group. Inter subject differences are larger for the hearing impaired subjects than the other two groups.

Kempte and Turecheck (1987) studied "Reading achievement of prelingually deaf students and its

relationship to parental method of communication. A review of literature". This study indicated that deaf children of hearing parents, typically function at higher levels of reading achievement than deaf children of hearing parents but inconclusive evidence is available regarding the relationship between method of communication used with deaf children and their reading skills.

Creaghead, Emerson and Williams (1987) studied, "comprehension of idioms by hearing impaired children". The present study examined the performance of 70 six to fourteen year old hearing impaired children on three measures, idioms without context, idioms embedded in contexts, which provides cues to measuring and syntactically matched sentences, without figurative expressions. When the scores were compared with those of normal hearing children, it was found that the hearing impaired children not only had lower scores on all measures, but they were less effective in many contexts to determine meaning.

Pinnas (1988) studied "Constructive processing in skilled deaf and hearing readers". The results indicated that (1) the deaf students took longer than the hearing readers to answer both types of questions (2) The deaf students demonstrated larger latencies for inferential questions presented in the 20 mts. intervals to the 30 second interval indicating that the inference was not formulated at the time of reading, but rather during questioning. This strategy suggested that those deaf students are processing inference

in a non-constructive manner. The work of McKron and Ratcliff (1986) suggested that inferences may be praised during the reading process but not actually formulated units specially cued. Thus this result suggests although the deaf students did not exhibit the characteristics of the constructive reader their pattern of processing may not be indicative of a deficiency in inferential processing. Considering that the deaf students were as accurate in their inferential responses as hearing students were, it may be that processing difference exhibited by the deaf readers reflects the use of adoptive strategy.

Kempe (1989) studied, "Reading comprehension of deaf Adolescent residential school students and its relationship to hearing mothers communication strategies and skills". There is a nation wide survey conducted to examine the relationship between prelingually deaf adolescents reading comprehension scores and their hearing mothers communication strategies and skills. A potential relationship was found, between reading comprehension scores and signing skill levels of mothers who used manual communication.

Gibbs (1989) studied, "Individual differences in cognitive skills related to reading ability in deaf". Results indicated that deaf reader actually has much in common with the hearing readers. Both deaf and hearing readers with high reading scores also carry a strong awareness of what is going on in the text that they are reading. They recognize errors and contradictions, they look for high truth value. In short they are

metacognitively sophisticated. It appears teaching metacognitive skills will be productive in developing reading skills. Knowing what are known, knowing what has been understood and being aware of coherent and incoherent texts are all critical components of reading skill. Sharpening of these skills would place the deaf reader in a much better position to explore successfully the world of the printed text. Spencer and Gutfreund (1990) studied, "Characteristics of "Dialogue" between mothers and Prelinguistic hearing-impaired and normally hearing infants". Dialogues between normally hearing mothers and their prelinguistic hearing impaired or normal hearing infants were analysed to determine relative contribution of mothers and infants. Identification of topic initiation and responding behaviour was found to provide important information about dyadic interactive patterns. No group differences were found in responsiveness of mothers and infants. Hearing impaired infant produced fewer potential topic initiating behaviours than did normal hearing infants. Mothers of hearing impaired infants contributed a greater percent of dyadic topic initiation than the other mothers did,

Hanin (1993) studied, "The contribution of use of linguistic context to speech and reading proficiency". The hearing impaired and normally hearing performed equally well on a recognition of phonemes in a syllable; hearing impaired

subjects, however demonstrated a superior ability to make use of linguistic context found in sentences.

These studies showed that deaf children were far beyond normal children in their language acquisition and this might be the basic cause of poor reading abilities of hearing impaired children. However, it is possible to train develop reading skills in deaf children.

2.5. Comparative studies between poor and good readers :

Review of studies related to poor and good readers enable us to understand the main drawbacks of poor readers and the nature of abilities of good readers so that efforts can be taken to develop such abilities which are essential for good reading in poor readers. With this point of view a few studies were reviewed in this section.

Creaghead and Donely (1978) studied " Oral and Reading comprehension of super ordinate and sub-ordinate information". The reading and oral comprehension skills of two good and poor readers were examined by presenting writing and oral sentences in a picture identification task. The sentence contained the important information in either super ordinate clauses or subordinate clauses. It was found that the good readers had significantly better oral comprehension skills than poor readers and that exceeding information in subordinate clause made sentences significantly more difficult for both groups under reading condition.

McGee (1981) studied "Effects of the cloze procedure on good and poor reader's comprehension and suggested that when cloze tests are carefully constructed, these tests may be effectively used to increase the comprehension especially in poor readers (1981)

Hansen, Liberman and Shankweiler (1984) studied "Linguistic coding by deaf children in relation to beginning reading success". "The coding of printed letters in relation to the level of success of prelingually and profoundly deaf children (median age of 15 years) in beginning reading was studied. As determined by recall errors the children who were classified as good readers appeared to use both speech and finger spelling (manual) codes in short-term relationship of printed letters; In contrast deaf children classified as poor readers did not show influence of either of these linguistically based codes in recall. Thus, the success of deaf children in beginning reading, like that of hearing children, appears to be related to the ability to establish and make use of linguistically recorded representation of the language. Neither group showed evidence of dependence of visual cues for recall. In summary, the deaf children need not be limited to reading strategies that involve visual retention, instead they are able to make use of linguistic strategies - derived, it appears, from spoken and manual language that could mediate comprehension. Although language system is accessed via different modalities in the speech based and

manually based codes used by the good readers, both provide the reader with a means of representing the internal structure of words. (See also Hirsh - Pasek (1981) and specifically, in terms of the present study, provide a linguistic basis for holding information in short-term memory. This results argue that successful deaf beginning readers differ from their poorly reading counterparts in the use of these linguistic recall strategies. This suggestion is consistent with research on hearing children indicating that differences in the use of linguistically based representation in working memory as a relevant factor in learning to read.

Allington (1984) studied, "Content coverage and contextual Reading in Reading groups". The results of this study indicate that the greatest amount of silent reading done by good readers reading noted. These data reinforce and extend the findings presented on other research on differences in content coverage and pacing of students through reading materials.

Norris (1986) studied "Use of cohesive Devices by good and poor readers" and indicated that subjects who were good readers used a higher proportion of more complex strategies to maintain cohesion such as temporal and causal conjunction and lexical terms to mark the recurrence of information. Hanson and Liberman (1984): Studied "Linguistic coding by deaf children in relation to beginning reading success". The coding of printed letters in a task of consonant recall was

examined in relation to the level of success of prelingually and profoundly deaf children. (median age 8.75 years) in beginning reading. As determined by recall errors, the children who were classified as good readers appeared to use both speech and finger spelling (manual) codes in short-term retention of printed letters. In contrast, deaf children classified as poor readers did not show influence of either of these linguistically based codes in short term retention of printed letters. Thus, the success of deaf children in beginning reading, like that of hearing children, appears to be related to the ability. To establish and make use of linguistically recorded representations of the language. Neither group showed evidence of dependence on visual cues for recall. In summary the deaf children need not be limited to reading strategies that involve visual retention; instead they are able to make use of linguistic strategies derived, it appears, from both spoken and manual language. Although language system is accessed via different modalities in the speech based and manually based cells, used by the good readers, both provide the reader with a means of representing the internal structure of words and especially, in terms of the present study, provide a linguistic basis for holding information in short term memory. This results argue that successful deaf beginning readers differ from their poorly reading counterparts in the use of these linguistic recall strategies. This suggestion is consistent

with research on hearing children indicating that differences in the use of linguistically based representations in working memory as a relevant factor in learning to read.

Davey and King studied (1991). Deaf readers' acquisition of word meaning from context. This study revealed that low vocabulary of deaf readers appeared to revert to a sentence based processing approach, with heavier use of a replacement strategy. In addition, they committed more errors of syntactic processing and exhibited more strategies of simple sentence reconstruction and simple visual matching than did high vocabulary readers. This study indicated that high and low vocabulary deaf readers generated comparable numbers of meaningful units and utilized similar processing strategies when the material explicitly and unambiguously signaled the central meaning units. However, with the less explicit sentences sets, the high vocabulary group exceeded the low group in generating acceptable meaning units (Single findings from Strassman et al 1987 observed (Strassman D, Kretschmer, R, and Blakey L (1987). The instantiation of general terms by deaf adolescents/adults (Journal of communication disorders Vol 20 p. 1-33) Low vocabulary deaf readers appeared to revert to a sentence based processing approach, with heavier use of replacement strategy. In addition they committed substantially more errors of syntactic processing and exhibited more strategies of simple sentence reconstruction and simple visual matching than did high vocabulary readers. In self report high vocabulary readers (it was

revealed) used context based strategy first and then use of dictionary where as low vocabulary readers used dictionary first rather than context

Gillman (1992) studied, "Print cue usage by pre-readers beginning readers, and experienced readers". This research investigated pre-readers, beginning readers and experienced readers use of grapho-phonemic syntactic semantic spelling and pictorial cues. The subjects were shown altered texts, designed to systematically reduce the cues that were available in the print-setting. Results suggest a developmental progression toward greater reliance on grapho-phonemic and pictorial cues. These findings conflict with one tenet of "Whole language" accounts of early literacy.

Lillo-Martin; Watson and Smith (1992) studied "Deaf readers comprehension of relative clause structures". It is commonly found that most deaf readers display an overall depressed level of reading performance in conjunction with specific difficulties on complex syntax of relative clause structure was tested in written English, signed English and American sign language. It was found that the behaviour of deaf good and poor readers was parallel across relative clause sentence types and that the deaf readers generally performed similarly to hearing readers tested in a different study. These results support the hypothesis that a specific syntactic disability does not differentiate good and poor readers. Instead, it is suggested that a

processing deficit may underlie the poor readers comprehension difficulties.

Bonacci (1993) studied, "The acquisition of word knowledge from expository context in skilled and less skilled readers. "This study explored the ability of skilled and less skilled readers in grade six to acquire word knowledge from two different expository contexts. Results indicated that skilled readers performed better than less skilled readers on vocabulary recall measures. Skilled readers acquired more information than less skilled readers from both definition and analogy contexts.

Lillo Martin, Hansan Watson and Smith studied (1992) "Deaf readers comprehension of complex syntactic structures and found that the difference in reading ability between good and poor readers is likely to be based on processing differences rather than on differences in grammatical knowledge. This study suggested that cognitive basis for reading in relation to the processing function is different in good and poor readers, though the syntactic knowledge in particular (knowledge of relative clause structures) is not deficient in poor readers i.e grammatical knowledge is equivalent to both readers group atleast with respect to relative clauses.

Above studies show that there is difference in the language ability , approach and processing strategies of poor and good readers and hence good processing strategies

should be developed even in poor readers for improving their language and reading levels.

2.6. Studies at National Level :

A few studies have been reviewed at national level to understand the progress of research in the education of the deaf especially with reference to reading, evaluation and writing. Most of the studies reviewed are at post graduate research studies; only one or two doctoral level research studies were reviewed. In general research in this area is conspicuously lacking due to lack of adequate awareness and qualified personnel in this field.

Devaki Devi's (1978) study on "Reading readiness test in Kannada, its development and standardization" showed that this test is satisfactory diagnostic test which can be used to identify reading problems at an earlier age. It also helps the teachers to find out the abilities in which the children are lagging behind. With the help of which teachers can train them in these areas. This test satisfied the criteria of good content reliability. This test can be used as a guide to identify the weaknesses in the specific abilities tests. This test also provides a quick and reliable measure of the important reading readiness factors such as vocabulary, visual discrimination and auditory discrimination. Once the teacher knows the strengths and weaknesses in these vital reading readiness skills and abilities he/she can take positive steps to develop these skills in these children.

Purushothaman (1986) studied, 'A frame work for testing Kannada Reading on the basis of automaticity, rules of orthography and sequential processing . Behaviourally automaticity in reading can differentiate poor readers from good readers. The pattern of relations between reading and the cognitive processing strategies may be revealing the difficulties in the processing of reading. Implications are (1) Automaticity is important factor in learning to read fluently. Learning of the details of print is very important. Though practice may be a contributing factor for automaticity, learning of the details of print is very important. Knowledge of the rules of orthography is very important factor in learning to read Kannada. Knowledge of the rules of orthography , particularly in reading phonetically regular scripts will be highly contributing to fluency and precision. Good readers are able to acquire the rules of orthography and automaticity in reading better than poor readers. Poor readers of kannade fail to read correctly whenever the syllables incorporate more than three ligatures in print. Poor readers also find the syllabus incorporate more than three ligatures in print. Poor readers also find the syllables with two or three consonants difficult to read; Poor readers of Kannada also show poor grapho-phonemic associations and exhibit confusions among the letters of the alphabet. Poor readers also do not make use of the cues provided in the immediate past in reading exhibiting their difficulty in

learning from cues; poor readers difficulties in reading is a generalized one than specific to any level of script unlike among good readers who find only complex syllables difficult to read. Specific kinds of misreading for simple reversals are not the characteristic of either poor or good reader in Kannada.

Kiran Sharma (1990) studied, Reading abilities in primary-school children . Results showed that oral reading and reading comprehension correlated highly. Teacher rating on oral reading and reading comprehension correlated highly with the test performance. However with in the over all group there were individuals in whom (a) oral reading and reading comprehension performance did not correlate, thus the importance of this study lies in the fact that it is one of the first in the assessment of reading abilities of children in the learned language.

Ramakrishna (1990) studied, " A study of meta linguistic abilities in children . This study was designed to give information related to children's ability to segment utterances into words, syllables and phonemes of experimental and those of their own utterances. It was concluded that the segmentation tasks, segmenting phonemes was the most difficult for all subjects of the study. There was a strong relationship between the metalinguistic abilities testing segmenting syllables and words and the children's school achievement. It was easy for children to segment the experimenters utterances than their own probably

because they could not attend to both the production and attending to the production in a metalinguistic way. Good achievers were found to be better in their segmentation abilities.

Mythra (1991) studied "Logographic Reading skills in children". This study aims to determine whether children demonstrate logographic reading skills during the initial stages of learning to read. The conclusions of this study are (1) Pre-School age children do demonstrate logographic reading skills. (2) Logographic skills do not pertain rigidly to any one of the three age groups considered, but children in all three age groups demonstrate logographic reading skills, though the extent varies in each (3) The nature of responses and kind of differences among the three groups strongly indicates development trend (4) No specific word features could be identified which seems to facilitate logographic reading. In sum, the study seems to provide evidence for logographic reading and the underlying development processes of learning to read in agreement with the first stage of reading acquisition postulated by Frith 1965.

Dr.Vasantha (1991) studied "Accessing lexicon from print: A Psycholinguistic perspective on processing of written words in Telugu'. The author argues that any one or all three reading routes (Phonological, whole word lexical) may be used in processing Telugu words in print, depending upon the dialect (Coastal Vs Telangana) to which the

subjects belong, task of the subject (reading aloud Vs making acceptability judgement) composition of the text material.

Shirpa (1992) studied, 'A test of word finding abilities in children (Hindi)". This tool (tool) for the speech and language pathologist: Learning disabilities, professionals and other school personnel as a first step in a comprehensive evaluation of a child's word finding skills. Use of TIWACH to direct and complement diagnostic procedures in word findings will provide the examiner with helpful guidance in the overall assessment of children's word finding skills.

Pragna (1992) studied, The orthographic factor in phonological awareness in relation to reading (Gujarathi)". This study was planned to compare the extent of relationship between phonological awareness and orthographic features in learning to read. The results showed that (1) there is no significant difference in the speech segmentation ability semisyllabic script. (2) rhyme recognition scores of the two groups are almost similar (3) syllable stripping-scores of the children exposed to semi syllabic script are slightly better than those exposed to alphabetic script, however the difference in phoneme stripping task between English and Gujarati medium children in favour of the English medium children. Correlation between these tasks is low to moderate or even negative at times for Gujarathi medium

children. However due to limitations of the study, generalization of the results of the study should be done with caution.

Suma (1992) studied, "Story structure and Reading comprehension in the hearing impaired". The aim of this study is to find the effect of story and structure change on reading comprehension in normal and hearing impaired. The results showed that normals had minimum differences between the original and revised versions of the stories in all age groups. However, hearing impaired performed significantly better in the original stories as compared to the revised versions. This study clearly implies that reading comprehension is not affected in the normals inspite of the change in story structure, while story structures do effect the reading comprehension in the hearing impaired i.e. changing the sentence structures in terms of length, simplified syntax and vocabulary; hinders the reading comprehension. Hence this study implies that hearing impaired subjects should be reading well written story materials which are naturally cohesive instead of materials which are developed to meet a pre-determined set of rules for syntax, sentence length; or vocabulary.

Roopa Rao, (1994) studied, "Orthographic effects on naming speed and Accuracy of reading". Proficient reading is a skill developed through years of experience. Various factors affecting reading like word length, word frequency, meaning of the word, orthographic complexity have been

controlled and rapid reading tasks were assigned to subjects. Results showed a difference in reading rates between words, and non words suggesting the usage of whole word reading in word reading tasks. However, since a difference in reading rates of orthographically simple and orthographically complex words were found, it was concluded that phonologically mediated route also be contributed to word reading along with the whole word reading.

These studies at national level indicate that research studies in this field is quite meagre. However, efforts are being taken to conduct research in various dimensions related to hearing impaired academic field. But research in the area of teaching methodology to hearing impaired especially language skills with special reference to reading is conspicuously lacking.

2.7 Meta research :

In this section research review in the books and articles were summarized to get enlightened on research aspects of reading in deaf children.

Hart (1975) said in the book "Learning to read begins at birth" that to provide the very young deaf child with a background that will ensure a formal reading program in the pre-school. Activities which promote the young deaf child's oral language (particularly by making him sensitive to the suprasegmental aspects of language) and develops his conceptual and thinking skills will eventually do more for

that reading is a visual process. The child should be encouraged to read formal reading material and to write. The child, developing his auditory and perceptual awareness and recording his observations and observations are strongly recommended.

Bryant (1970) said in his article on "Reading the sentence barrier" in language and reading that despite the years of instruction a large number of deaf students never attain a level of reading proficiency sufficient to permit the complete comprehension of high school texts. Since language teaching with the deaf commonly emphasizes sentence level skills, low levels of reading achievement may partially reflect inadequate attention to the characteristics of continuous discourse. He says that hearing impaired can be taught at the level of operating on a reading passage. He concludes that low levels of reading achievement and poor writing skills prevalent among deaf children suggest that sentence centered language teaching does not automatically lead to proficiency with connected prose. Repeated presentations of written passage with exercises designed to facilitate their comprehension as well as illustration of the difference between reading and writing are suggested which underlie the understanding and comprehension of connected texts. Although the exercises described here were primarily conceived as classroom activities for children in schools for the deaf, they might be usefully incorporated into the supplementary language

this reading; than early sight vocabulary building. In formal reading activities such as reading aloud to the child, developing his interests and perceptual awareness and recording his activities and observations are strongly recommended.

Bryans (1979) said in his article on "Breaking the sentence barrier in language and reading Instruction" that despite the years of instruction, a large number of deaf students never attain a level of reading proficiency sufficient to permit the unaided comprehension of high school texts, since language teaching with the deaf commonly emphasis sentence level skills, low levels of reading achievement may partially reflect inadequate attention to the characteristic of continuous discourse. He says that hearing impaired can be taught in the context of questions on a reading passage. He concludes that low levels of reading achievement and poor writing skills prevalent among deaf children suggest that sentence centred language teaching does not automatically lead to proficiency with connected prose. Repeated presentations of written passage with exercises designed to facilitate their comprehension as well as illustration of the differences between reading and writing are suggested which underlie the unaided comprehension of connected texts. although the exercise described here were primarily envisaged as classroom activities for children in schools for the deaf, they might be usefully incorporated into the supplementary language

teaching given to hearing impaired children integrated into regular classroom.

Brown (1979) wrote in his article on "Beginning reading instruction with hearing impaired children" that children were reading with a language level below that generally considered a pre-requisite for beginning reading. He also showed that an adapted form of a commercially available beginning reading program could be successfully used for beginning reading with hearing impaired children. The overall conclusion was that numerical scores of language level cannot be the sole determinant for implementation of a beginning reading programme.

Hasenstab and Longhton (1982) wrote in the book on "Reading and writing the exceptional child" that the components of language namely syntax, semantics, pragmatics, and graphophology are mutually interdependent; therefore, observation often necessitates attention to the others (Wardbaugh 1969). In regard to the activity of reading, Wardbaugh contends that the reader uses visual clues of spelling knowledge, and syntactic and semantic competence to give meaningful interpretation of the text. Reading, then is a functional experience and knowledge of the world. In the mastery of reading, children employ all the components of language as they occur in written language format (Wischer 1976). Reading is a hypotheses testing process, that is the child imposes meaningful organization on incoming stimuli. The task of the teacher or the

evaluator is to determine what strategies and knowledge appear to be present at birth or soon thereafter (Browner, Goodman and Austin 1966; Perrill - Burnstein 1981) . Even low functioning children engage in hypothesis testing. Two kinds of hypotheses can be seen to be contributing to reading.

1. Those common to all children, irrespective of the experience provided (developmental milestone) and
2. Those unique to individual (idiosyncratic : Kretschmer 1979).

Children with reading disabilities probably develop maladaptation. In assessing these have to be classified as developmental or idiosyncratic (Kretschmer 1979).

Reading is core of linguistic awareness. A synthesis of current theories of reading and related topics that suggested that model of reading that includes the following components. Text cohesion, pragmatics, semantics, syntax, and graphomorphophonemics (GMP) (Kretschmer 1979). Children who know how to read (or write) already know pragmatics and text cohesion rules. In other words they are able to formulate hypotheses that gives them a basic context needed to discern meaning; children who do not know these rules are too often the very children who do not receive the benefits of appropriate instructional interventions.

The semantic aspects of the reading process involve more than simple word meanings. They, in fact, constitute the major aspect of reading comprehension schema theory and current theories and investigations about strong grammar seems to hold more potential for understanding the reading process than simple vocabulary acquisition that has been emphasized in the past. Knowledge of syntax allows predictions of various word order or grammatical relations of sentences. The basic unit of grapho-morphophoneme(GMP) (reception and productions) is the syllable. The basic unit for reading to the auditory system is syllable. So it seem sensible to use this type of strategy (sounding out new words syllabically rather than phoneme by phoneme). Successful reading requires the use of all five systems of the model ; it is possible that entry into the reading processing systems may occur at any point and may be unique for each individual. Based on a multitude of experimental factors, a child may approach depending on preference based on previous instruction, GMP, syntax, semantics, pragmatics, text cohesion, and comprehension are the levels of psycho-socio-linguistic model to reading. Reading success is having the hypothesis borne out across all psycho-socio-linguistic levels. Context is highly significant in the reading process and it also aids memory. Memory in turn is the storage place of previous learning. The result is almost a circular effect in that each component (context memory, comprehension) feeds and so on. The use of imagery,

especially with beginning readers, has been found to enhance comprehension and story recall (Anderson and Hilde 1971); (Guttman, Levin and Pressley 1977; Pressley 1976) Although context is attended to in most of existant reading methodologies it is seldom utilised to its full capacity and therefore full value is not realized.

LaSasso's (1987) study on "Survey of reading instruction for hearing impaired students in the united states" indicated that (1) the basal reader approach is used more frequently than a language experience approach (LEA) as the primary instructional approach at all instructional levels (2) programs using the basal reader approach, reading milestones is the most frequent choice at al instructional levels and is looked upon more favourably for the approapriateness of its vocabulary and syntax, figurative expression load phonics emphasis (3) about half of all programs using LEA involve teacher judgement in selecting target vocabulary and reading skills (4) all but 17% of the programs calculate students reading levels with standardized or informal measures (5) reading levels are cited as useful in reporting to parents, selecting printed materials and writing IEPs (6) only a quarter of all program view a standardized reading achievement test as valid (7) only 20% of the programs use formal procedures to select printed materials for hearing impaired students.

Moore's (1987) wrote in "Literacy: The development of reading and writing" that there is a general agreement that

for the fluent reader, the act of reading is an active constructive process. Such a reader has an unconscious mastery of English grammar and vocabulary and approaches the material with a wealth of background information and expectation. The reader has a range of skills and strategies to adopt to the characteristics of the materials. A sensitive teacher can emphasize the importance of parents reading to their children and provide some practical advice on how to introduce the child to print, course, materials also help young deaf child understand that there is a relationship among speech, signs, fingerspelling and print.

Literacy can be seen as consisting of two highly interrelated components - reading and writing. Literacy itself, is a sub component of a higher - order category that also includes direct person to person oral and manual communication. Traditionally, research on reading and writing of the deaf has focussed on areas of perceived weaknesses, especially, grammar, and has concentrated on the word phrase or sentence levels. More recent investigations suggest that the functional reading ability of deaf children is much higher than has been suggested by scores on standardized achievement tests on reading, deaf children and adults are able to employ their intact cognitive abilities and knowledge of the World to compensate for grammatical difficulties. In the area of writing, some recent developments suggest that approaches emphasizing

function (meaning) over form (syntax) may be more beneficial.

Some clear trends in the development of literacy skills may be identified. A shift appears to be taking place from an elemental, step by step process toward more holistic functional, semantic based instruction. The final outcome, may be use of a pragmatic blend of analytic and holistic techniques to develop literacy, some what akin to the interactive compensatory model advocated by Stanovich (1980). If so, it appears that an emphasis will be predominantly on holistic and meaning based instructional procedures.

Norris (1989) said on "Providing language remediation in the classroom - An integrated language to reading intervention methods" that techniques such as communicative reading strategies are advantageous because they enable language intervention to be provided with in the classroom resulting in benefits to the child, the classroom teacher, and the speech language pathologist.

Turner (1989) discussed "The role of language related factors in reading disability" in the book "Phonology and Reading disability (Shankweiler and L.y.Lieberman Ann-Arbor (Eds) 1989) and suggested that metalinguistic reading ability plays a critical role in the acquisition of reading skill and that deficient metalinguistic ability in beginning readers is the result of a developmental lag in decenteration ability. This lag in development may delay early progress

in reading to such an extent that it indicates what Stanovich (1986) described as a 'Cascade' of interacting achievement failures and motivational problems. Deficient metalinguistic ability is therefore seen not as evidence of a specific cognitive deficient metalinguistic ability. It is therefore seen not as evidence of a specific cognitive deficit, but rather as an indication of a slower rate of cognitive development which can be partially overcome by intensive training in metalinguistic skills. However, such training must be initiated as early as possible to avoid the snowballing consequences of reading failure that Stanovich (1986) describes. Studies have shown that metalinguistic ability is causally related to reading achievement even when differences in short term ability are controlled (eg: Bradley and Bryant 1983). It is therefore possible that verbal short-term memory deficits and developmental lags in metalinguistic ability both contribute to reading failure.

Hoover and Gough (1990) gave "A simple view of reading" in their book on "The simple view of reading". Reading consists of two components decoding and linguistic comprehension both held to be necessary for skilled reading. Three predictions drawn from the simple view were assessed in a longitudinal sample of English spanish bilingual children in first through fourth grades. The results supported each prediction (1) the linear combination of decoding and listening comprehension made substantial contribution toward explaining variation in reading

comprehension but estimates were significantly improved by inclusion of product of the two components. (2) the correlation became negative as samples were successively restricted relationship between listening and reading comprehension for increasing levels of decoding skills revealed constant intercept value of Zero and positive shape values increasing in magnitude. These results support the view that skill in reading can be simply characterized as the product of skill in decoding and linguistic comprehension.

Hanson and Watson (1991) said in the book "Phonological processes in literacy". A Tribute to Isabelle Y. Liberman" that Susan Brady and Isabelle Liberman were among the first to understand that reading problems may be reflections of a more general problems in the language domain and research on deaf readers illustrate this point; their auditory impairment levels, infact, their visual and intellectual abilities. At first blush, therefore, it might seem that reading being 'visual' task would present no particular problems for a deaf person. Yet the demographic data and experimental research show that this rationale to be incorrect. Reading acquisition is particularly difficult for deaf persons, and this difficulty is associated with problems in the language processes underlying speech perception and production. As discussed in this chapter. it also has the important consequence of limiting the development and the efficiency of phonological coding, which

has consequences of verbal short terms memory processes that underline reading.

2.8. CONCLUSION :

To conclude the research studies focussing factors influency reading skills were reviewed to get awareness with regard to factors to be considered in developing reading skill. Studies related to teaching of reading were reviewed getting insights into the methods of teaching of reading to hearing impaired. Studies emphasizing cognitive aspects of reading in hearing impaired were undertaken to get sensitized with regard to the abilities of hearing impaired in cognitive aspects. A few studies on evaluation and assessment threw light on the measures of evaluation and studies of comparison of deaf and normal, good and poor readers gave some direction for educating the hearing impaired children. Thus this review of literature enriched the investigators understanding and helped in forming appropriate research design.

In short, the review of literature related to the development of reading skill in hearing impaired children and teaching of reading indicated that the practices to teach reading to hearing impaired children were not adequate. The abilities of hearing impaired children in developing reading skill in specific isolated aspects appears to be promising in some researches. Potential abilities of hearing impaired children with reference to

their cognitive and meta cognitive skills are yet to be tapped successfully in research. There is dire need to develop programmes for hearing impaired children at various levels, using class room teaching and making use of school subjects as a medium for developing reading skills in hearing impaired children would be advantageous. As language develops in a wholistic environment, development of reading skills in turn language in a natural, experiential environment with wholistic approach sounds to be desirable for hearing impaired children.

CHAPTER - III

METHODOLOGY

3.0 Introduction :

In the earlier chapters reading, its importance to students in general, hearing impaired in particular, and studies that focus on various aspects of developing reading in hearing impaired students were discussed. In this chapter the procedure of the study was explained. This chapter gives detailed account of the development of the tools used, levels of reading identified, selection of the sample and other variables considered for study, administration of the tools and collection of data and statistics used for analysis and interpretation.

The study is undertaken in three parts sequentially. The details of the procedure followed in the three parts of the study were explained in the following sections

First part of the study consists of identification of the levels of reading ability. The identification of the levels of reading ability was based on a thorough reading of the literature on reading and review of the empirical studies on reading with special reference to hearing impaired children. As this study was aimed to develop a few strategies that would help in improving the reading abilities of hearing impaired children it is essential, first of all, to identify different levels of reading

and evaluation are involved. The classification of reading skills by various authors though differ in their labelling, they mainly refer to the following three levels of reading. (Haris smith; Francis Robinson 1970; Bloom, Barret 1968, Barret 1966, Gray Robinson 1960; Bloom Barret 1968, Barret 1966, Gray Robinsom 1960 Walcutt 1967, Hecker 1968).

3.1.1 Reading the lines : To comprehend a passage one requires at least three abilities :- the ability to observe, and use the different relationships of ideas, the ability to set specific purposes in reading, and the ability to make full use of previous learning in attacking the new material. In literal comprehension the student reads the lines. In terms of Niles (1963) . This means simply listing the ideas and or arranging them chronologically.

3.1.2 Reading between the lines: The reader reads between the lines at the interpretation level and reacts to the ideas expressed in the passage. According to Niles (1963) this means, observing comparison, contrast relationship or cause and effect relationship. The ability to observe one or more of these relationships is a component of comprehension skill. The perception of a specific purpose in reading facilitates comprehension, Associational reading, that is reading making full use of the back log of real and vicarious experiences that one posses makes reading more meaningful Niles calls this ability reading readiness in an extended form. All these - observing relationships,

perception of purpose, associating - means reading between lines and reacting to the ideas expressed in the passage.

3.1.3 Reading beyond the lines : Reading beyond the lines means inferring for predicting, judging. This means reflecting for the purpose of reading a conclusion. According to DeBoer (1946) this means searching for relevant material, evaluation of the data, identification and comparison of and the synthesis of findings. It involves the capacity for suspended judgement and the interpretation of the writers motives. This judgement is based on sound criteria developed through previous experience Robinson (1966) pointed out that reading beyond the lines requires competence in the basic skills and abilities in word perception, and comprehension, an inquiring attitude, a background of information about the topic, ability to weigh evidence while one suspends judgement and understanding or control of one's basic attitudes. This means reading critically.

Reading beyond the lines also includes another dimension viz reading creatively. This means selection and rearrangement of ideas obtained into new thoughts and fresh ideas. In creative reading one thinks about the many possible uses of the information one is reading. Creative reading transforms the reading material into something highly personal. It fosters divergent thinking about what has been read. The creative reader has to think of new possibilities suggested by the statement of the problems,

other possible hypotheses, better methods of collection of data, possible conclusions and interpretations of the findings, and an appraisal of the possibilities stemming from the findings (Torrence and Harmon 1961).

Thus there are three levels of reading. The first level namely literal comprehension is at the lowest order the second level interpretation is at the middle order and the third level critical and creative reading is at the higher order of reading.

3.2 Skills of reading : Each of these levels consists of number of skills. The performance of these skills will facilitate the reader to acquire the ability at different levels.

3.2.1. Reading lines :- Literal level : This level includes three skills of reading namely identifying skill (2) relating skill and (3) organizing skill.

3.2.1.1. Identifying skill : Identifying skill means identifying main ideas, details, facts or opinions and purpose of the content. Students will be in a position to evaluate or critically read the content of the given text only when they can understand the given matter in terms of its ideas, its importance and purpose. For example in the sentence, "Kosavavarma, a zaminder wishing to build a beautiful palace, called for famous sculptors. "In this sentence the student has to understand main idea of the sentence i.e the Zamindar wanted to build a beautiful

other possible hypotheses, better methods of collection of data, possible conclusions and interpretations of the findings, and an appraisal of the possibilities stemming from the findings (Torrence and Harmon 1961).

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palace. Other details in the sentence are (1) Kesava varma is a Zamindar (2) He called for the famous sculptors (3) He wishes to build a beautiful palace (4) He has also got enough money to build a beautiful palace. Only when the students understand these ideas, they will be able to understand the authors purpose in stating this sentence i.e Kesavavarma is interested in building a beautiful palace irrespective of its cost. Similarly the students should also know that Kesavavarma's interest in building a palace is a fact. On the contrary if he/she thinks that Kesavavarma's interest in building a palace is his opinion, then there is the possibility of his/her deciding the idea of this sentence in different ways as biased, or emotional depending upon his/her knowledge and judging capacity.

3.2.1.2 Relating skill : Relating skill involves the skill of relating the main idea to the details given under that main idea, and the skill of finding out the relationship between the main ideas. If the student understands how a main ideas is related to the other details given under it, he will be able to follow the manner of presentation of the topic. If he/she is able to follow the relationship of main points of all paragraphs in the text, he will be able to understand the topic in the right perspective. This will enable him/her to think of other aspects of the topic related to the point of view focussed by the author. He would also understand how these aspects are related in the

palace. Other details in the sentence are (1) Kesava varma is a Zamindar (2) He called for the famous sculptors (3) He wishes to build a beautiful palace (4) He has also got enough money to build a beautiful palace. Only when the students understand these ideas, they will be able to understand the authors purpose in stating this sentence i.e Kesavavarma is interested in building a beautiful palace irrespective of its cost. Similarly the students should also know that Kesavavarma's interest in building a palace is a fact. On the contrary if he/she thinks that Kesavavarma's interest in building a palace is his opinion, then there is the possibility of his/her deciding the idea of this sentence in different ways as biased, or emotional depending upon his/her knowledge and judging capacity.

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given context and how they enhance the depth of understanding of the given topic.

3.2.1.3 Organization skill : Organization skill indicates the skill of arranging the points or ideas read in the text in an order logical or relational. It also includes the skill of summarizing the ideas discussed under a topic. The skill to summarize and organize in an order makes the students remember in a nut shell all the important points discussed in the topic, know how they are related, the order in which they are discussed, and their relative importance to the topic chosen. This skill provides scope for inferring ideas, and evaluating them on the basis of students own experience and knowledge. If the students do not remember all the points given in the passage, in what relationship they are given and their relative importance in focussing the topic chosen, their evaluation will be defective, even though they have good judging capacity as well as good background knowledge of the topic discussed. This skill also makes the students develop their syntactic and semantic understanding, improve their language ability through noting down precisely and pointedly. Hence this skill is essential to improve or develop students reading ability.

The passage that follow illustrates the function of organizing skill in reading. Realizing that for a common men daily necessities are more important than his beautiful palace, Zaminder made necessary arrangements for drinking

water in his area so that people would not suffer from lack of drinking water.

What follows could be an organized summary of the passage "(1) For a commonman daily necessities are important (2) Beautiful palaces are not necessary for common people (3) Drinking water is daily necessity for the commonman (4) Zamindar realized this fact. In this summary there are four main points

- (1) Common man's necessities are different from the wealthy person
- (2) For a common man daily requirements are more important
- (3) Where as for a wealthy person building a palaces may be important
- (4) Zamindar realized this fact and arranged for drinking water supply for the commonman in his area.

Students' should know these points and in the same order also, if they have to understand that Zamindar has not realized the importance of drinking water to the commonman in the initial stage but he understood this when he observed his labourers feelings, working in the construction of his palace. All these facts the students would know, once they are asked to summarize the given passage. Infact summary implies the main points in order indicating the relationship.

3.2.2. Reading between the lines : Reading between the lines means inferring. Inferring may be for finding out the reasons, to understand the facts, attitudes, bias etc. Hence at this level one skill is involved i.e reasoning skill.

3.2.2.1 Reasoning skill : Inferring is the important aspect of reading. Inferring can be of two types inferring ideas from the explicitly given statements. for example in the sentence, 'The boy was nine years old when his mother died, and he and his sister had to take care of themselves until his father married again, as he did, twelve months later'. The inference is that his mother died when he was nine years old and his father married again after one year or twelve months. He and his sister had taken care of themselves during these twelve months. These are explicit inferences as they are given in the sentence. Second type of inference is implicit inference. For example "Zamindar made arrangements for adequate drinking water supply for his workers in his area. There after the sculptors worked for the construction of the building very committedly". In these two sentences, the inference that can be drawn is that the workers were happy as the Zamindar made arrangements for adequate drinking water supply. Because they are relieved of their family burden, they could work committedly in the construction of the house. These ideas are not explicitly stated in these two sentences. But they are implied in the sequence. This type of inference, where ideas are not openly

stated but need to be inferred from the sequence of ideas expressed is called implicit inference. This is very important in reading skill for proper understanding of the text, as generally students misunderstand, or loose track of the ideas expressed in the text, if they do not develop this skill.

Thus reasoning is necessary in various aspects to understand the given text in its proper and complete perspective. Sometimes the text may contain main ideas implicitly given, details may be implied. The students may have to infer through reasoning the purpose or intention of the author in presenting the topic and the way he is presenting it. The students may have to infer the bias of the author from the way of his presentation. Inference may have to be made on the attitudes, emotions and personality of the author, tone, style, objectivity or subjectivity. Therefore any print material can be properly understood in its full implications only if appropriate inferences are made either explicitly or implicitly based on the ideas presented. Only when the text is understood in its right perspective, the students will be able to further reason out to get more implied and implicit information. It is not mere guessing but is based on rational analysis of the given information.

3.2.3. Reading beyond the lines : Reading beyond the lines means understanding the authors' future intentions, evaluating the given information and ability to question

authors' perspective and if possible ability to view the presented parts in a different or novel perspective. Hence at this level four important skills are to be developed. They are

- (1) Predicting skill
- (2) Judging skill
- (3) questioning skill
- (4) Creative reading skill

3.2.3.1. Predicting skill : Predicting is another dimension of inferring. It stimulates one's thinking and gives scope for verification, justification and modification. Prediction makes students to read beyond the lines. Students ability to foresee things ahead even before they read the text completely, develops from this predicting skill. This skill helps the students in quickening their reading speed, once their predictions are correct and analyse their wrong predictions, if they go wrong, and thus soon getting into the groove of the authors way of thoughts while reading the passage or text.

3.2.3.2 Judging skill : Evaluation requires judgement of the adequacy of the content for the given topic, for the supposed audience or readers, use, misuse, abuse or disuse of the relevant information, objectivity of the author in presenting that particular topic and how far it is realized in his way of presentation. It also includes the good and bad points of the topic and drawbacks in the presentation,

distractions and deviations introduced, the reasons for deviations, whether the deviations are necessary or not, if necessary how these deviations would contribute, to the main theme of the topic, if not, why the author deviated and its result on the main theme, all these aspects of the content are to be judged. Students need to be given activities which will make them think, judge, and decide about the given content in terms of its purpose, appeal, relevancy, consistency, adequacy and applicability.

3.2.3.3 Questioning skill : Questioning skill is the nucleus of any one's thinking ability. This skill is required for reading in general and critical reading in particular. Unless students develop questioning attitude, they will not get stimulated to think about various aspects of the textual information while reading. The moment a student reads anything, he/she should be able to expect the aspects, the author is going to discuss under the given title. Once the students develop this skill of asking questions on the given topic, their thinking can be further deepened and sharpened through different types of questions as they progress in their reading. For example when the students read the title such as "Interest in work or character of a scholar" the students should be able to write questions to which they are expecting answers in the given topic or they should be able to think of different aspects of the topic and question which aspect the author is going to discuss in that particular topic. This questioning

attitude develops curiosity, interest and inquiring nature which are conducive to reading in general and critical reading in particular.

3.2.3.4. Creative reading skill : This is the extension of critical reading. When the students evaluate the given content with their knowledge and experience they will be in a position to suggest modifications for the topic to make it more interesting, appealing and attractive. Students' thinking and critical reading can also be further developed when they are asked to think the new ways of using the given ideas of the topic or a new way of presenting the given ideas for better appreciation by adding examples, descriptions, arguments or anything that will make the topic more interesting, atleast from the students point of view. Introducing this type of creative reading in the class room situation fosters in students a sense of achievement and originality and when their ideas are accepted and discussed, students develop personal involvement in reading. This skill not only deepens students thinking but also develops good interpersonal relationship with the teacher as well as amongst the students and inculcates positive attitude towards group work through frequent group discussion.

Thus in this study totally eight skills of reading were identified. The following table gives the eight skills and their aspects identified in this study.

Table 3.1 ; Reading skills and their aspects

Skill	Aspects focussed
<u>I Reading the lines</u>	
1. Identifying skill	1. Explicit Main idea 2. Explicit details 3. purpose
2. Relating skill	1. Main ideas 2. Main ideas and details 3. Main ideas to the purpose
3. Organizing skill	: Summarizing
<u>II. Reading between the lines</u>	
4. Reasoning skill	1. Explicit Inferring of purpose, main ideas, and details 2. Implicitly inferring purpose, main ideas, and Exact points
<u>III. Reading beyond the lines :</u>	
5. Predicting skill	1. predicting the future content 2. Predicting the conclusion
6. Judging skill	The content in terms of 1. Validity 2. Purpose 3. Use
7. Questioning skill	on the basis of 1. Title 2. After reading a part of the passage
8. Creative Reading Skill :	1. Applying the ideas learnt new situations or using them novally.

3.3 Strategies : The strategies for various skills elaborated under each level were discussed in this section. Strategies are the activities that the reader has to perform, exhibit or do for achieving a particular skill. They are the means through which the reader develops particular skill. Five strategies for the identifying skill, three strategies for relating skill, two strategies for organizing skill at initial reading level i.e reading the lines; at the next level four strategies for reasoning skill were identified i.e reading between the lines and four strategies for prediction skill, three strategies for judging skill, two strategies for questioning skill, two strategies for creative reading skill at the third level of reading namely reading beyond the lines were developed.

3.3.1. Reading the lines : Identifying, relating and organizing ideas were the skills essential for this level of reading

3.3.1.1. Strategies for identifying skill : Identification is an understanding activity and it involves separating the main concept, idea or fact from the mass of information read. Students may do so by (1) identifying the explicit main idea of a sentence (2) Identifying the explicit main idea of the passage (3) identifying the main idea of the topic (4) Identifying the explicit details given in the passage (5) Identifying the purpose of the topic given.

3.3.1.2. Strategies for relating skill : Relating skill helps in comprehending the passage with coherence. It involves activities such as (1) Relating main idea to its details in terms of cause and effect, elaboration or description, logical arguments etc (2) relating all the main ideas of the passage through logic or reason (3) relating the main ideas to the purpose of the passage.

3.3.1.3. Strategies for organizing skill : After seeing the relationship among the identified main ideas, the reader has to organize them in a logical sequence to get the meaning of the passage. The organizing skill involves the following activities (1) Summarizing the main points of the text (2) Arranging the points in the textual order.

II.3.3.2. Reading between the lines : Reasoning is the skill necessary for this level of reading.

3.3.2.1. Strategies for reasoning skill : Reasoning is the basis for stimulating thinking. This reasoning ability deepens one's understanding of the topic. Activities that can be provided for developing this skill in children are (1) Inferring from explicit main idea (2) Inferring from explicit details (3) Inferring from implicit main idea and details (4) Inferring exactly what the author has said, and its implication.

3.3.3. Reading beyond the lines : Prediction, Judging, questioning and creative reading are the skills necessary for this level.

3.3.3.1. Strategies for prediction skill : Prediction is saying in advance. This skill involves activities such as (1) Predicting the passage after reading a few lines (2) Predicting the middle ideas when the first and last paragraphs were given (3) Predicting the beginning after reading middle of the passage (4) Predicting the purpose of the passage from the title.

3.3.3.2. Strategies for judging skill : Judging skill involves the following activities (1) evaluating whether the given content is relevant or irrelevant for the topic (2) Whether the ideas expressed are true and worthy of retaining, whether the topic selected is interesting or not and the reasons for such feelings (3) Usefulness of the topic to the expected reader.

3.3.3.3. Strategies for questioning skill : Questioning skill stimulates thinking ability. It involves identifying appropriate questions for topics given (2) Framing questions for the topic given.

3.3.3.4. Strategies for creative reading skill : Application is the skill involved in this type of reading. Reading becomes complete only when the information read is applied in contexts other than the ones in which it is read. Application involves activities such as (1) applying the ideas given in the text in a new situation (2) thinking ways of using the ideas in a practical set up.

The various strategies suggested for the development of different skills for the promotion of reading in students at different levels as discussed above under heading strategies are summarized in table no 3.2

Table 3.2 Strategies for the various skills of reading at different levels

Level	Skill	Suggested strategies
1. Reading the lines	1. Identifying skill	1. Identifying explicit main idea of a sentence.
		2. Identifying explicit main idea of a paragraph.
		3. Identifying the main idea of the topic.
		4. Identifying the purpose of the topic.
		5. Identifying the exploit details in the passage.
	2. Relating skill	1. Relating main idea to the details.
		2. Relating all main ideas in the passage through a logic.
		3. Relating main ideas to the purpose of the topic.
	3. Organizing skill	1. Summarizing
		2. Arranging the points in the textual order.

- | | | |
|-------------------------------|----------------------|---|
| II Reading between the lines | Reasoning skill | 1. Inferring from Explicit main idea.

2. Inferring from explicit details

3. Inferring from implicit main idea & details.

4. Inferring exact points and purpose of the text. |
| III Reading beyond the lines: | Predicting skill | 1. Predicting after reading a few lines

2. Predicting the middle passage.

3. Predicting the initial passage from the latter half.

4. Predicting the purpose of the passage from the title. |
| | 2. Judging skill | Evaluating the content for
1. Relevance
2. Interest
3. Worth and usefulness |
| | 3. Questioning skill | 1. Identifying the questions for the given passage.

2. Framing the questions for the given topic. |
| | 4. Creative reading | 1. Applying the ideas given in the text in a new situation.

2. Thinking ways of using the ideas presented in a practical set up. |
-

3.4.0. Instructional techniques for the practice of strategies ; The strategies suggested are to be practised by the students for the development of reading skill. Practice sessions in reading have to be arranged by the teacher helping students practice the strategies. An instructional technique for such practice sessions is developed and it is described in the following sections.

3.4.1. Predicting skill : The strategies under predicting skill are to be practiced before the beginning of the lesson as the students have to predict the content at different levels which means the students should not be familiar with the topic before hand. The students are asked to predict the content of the text from the title. Thus the students are asked to read the first para and compare their predictions with the content of the first para and are asked to reason out their mispredictions, if any. Then they are asked to read the end of the passage and find out the authors predictions, compare their predictions and the authors and reason out the deviation in their predictions if any. At this point the students are asked to predict the ideas presented in between the beginning and the end conclusions, Same strategy of reasoning out the deviations in their predictions if any are to be practised. This type of practise in predicting beginning middle and end of the passages helps the student how to focus their thinking based on the given information. It would be challenging and interesting to the students also, as their guesses are some

times accepted, which would boost their self confidence and thinking capacity. They automatically develop interest in reading to verify their predictions.

3.4.2. Questioning skill : Questioning skill is the next step to be practiced in the reading sessions. There are two strategies under questioning skill. The first activity is identifying the questions to which answers can be found in the passage to be read i.e the students are asked to read the title and then read the questions given under that title. They are supposed to identify the questions that could be answered from the content in the text. This skill depends on their prediction skill. The purpose of this activity is to make the students thinking more focussed and purposeful. The second activity is to ask the students frame some questions based on the content they read. This activity makes the students understand and differentiate the main ideas and details of the passage with more clarity and helps them to understand how questions are framed and thus develops their questioning skill.

Strategies under prediction and questioning skills are to be employed alternatively, first students are asked to predict the content of the text from the title. Then they are given some questions from which the students are asked to identify the questions that suit the content of the topic given. Then they are asked to read the first para and compare their predictions and check their choice of questions. Then they are asked to predict again, then read the second

para, compare their predictions and the actual content. This sequence should be followed for all paragraphs.

3.4.3. Identifying skill: While prediction and questioning skills make the students more attentive and thought provoking, the identifying skill makes the students identify main ideas, and details. The students can be divided into small groups depending upon the strength of the class and then each group is given one para and asked to identify first of all, all points. Then the students are asked to decide the most important point amongst the given points. If any group finds it difficult to do so, the students are given guidance through helping them to identify key words in the sentence, then key sentence in the paragraph and key idea of the sentence in the paragraph. The students are also asked to give reasons for their decisions at each step which makes the students alert and be active and understanding rather than follow the steps blindly through observation.

3.4.4. Relating Skill : Each paragraph is taken separately all the points are listed and then the main idea is underlined. The students are asked to find the relating of each of the sub-points mentioned in the paragraph to the mainpoint, whether the sub points elaborates the mainpoints, describes, gives reasons or gives examples. Thus the relationship of each of the main idea to its details are focussed. Then all the main points of the passage are listed, key point of all these main points is identified.

The relation of these main points to the key idea of the passage is drawn out through questioning.

3.4.5. Reasoning skill : Reasoning skill has to be developed through mainly two types of activities namely inferencing from explicit ideas and inferencing from implicit ideas. To make the students understand how to draw the inferences from explicit ideas, the students are asked to list all the ideas in the passage identified by them, then, they are asked to read the lines again and again where they can draw inferences from explicit statements by focusing their attention on the gaps indicated in the ideas of two sequential sentences or by indicating them to think about the character of the person, attitude of the author or emotions expressed through the meaning of the sentence given in the passage. This step requires a lot of patience and ability of the teacher to question the students for focussing the idea, as he/she has to redirect, reframe the questions to make the students infer the ideas. The teacher points out the relevant part of the text and asks the students to read that particular part of the text and infer the idea behind it. The students are asked to decide whether that idea adds to the details of the main idea or forms a separate main idea. Similarly they are asked to infer character, attitude bias, emotions, assumptions and other possible points in the text.

3.4.6. Organization skill : There are two strategies for organization skill. First one is asking the students to read the complete text and give a brief summary of the text read. Second activity is asking the students to arrange all the points given in the text in a logical order or related order or in the textual order. To develop this skill, students are asked to do independent work and then their answers are compared for the best summary and organization.

3.4.7. Judging skill : To make the students judge and question each of the ideas presented in the text, they are asked to read the complete text and list all the ideas in the text. Then each idea is taken and discussed for the relevant value judgement that is whether the idea is fact or opinion, relevant to the topic or irrelevant, reliable or not reliable. They are also asked to question the usefulness, naturalness, and practicality of the ideas. In each case the decisions of the students are questioned as to why they have taken that stand and reasons insisted on either from their personal experience or from the text or from any known source.

3.4.8. Creative reading skill : Students are asked to express their opinion on the nature of the topic whether it is interesting or not and the reasons for their opinion. Then they are asked to suggest some other aspects of the topic and classify those aspects under interesting aspects, uninteresting aspects, reasons for their par-

Then they are asked to suggest some modifications which could be made in the text to make it interesting or more interesting and explain how these modifications make the topic interesting or more interesting. The students are asked to identify the point of view of the author and suggest other points of view of the topic discussed. Then they are asked to select one of the interesting aspects of the topic from their point of view and reasons are asked for getting interest in that particular aspect of the topic. They are asked to modify the aspect or substitute other aspects to make the topic still more interesting.

Thus the instructional technique for the practice of the strategies for developing reading skill has eight phases. In each phase the students are given practice in reading the text and one (aspect) of the reading skill is focussed through questioning and students are encouraged to answer through promptings suggestions, reinforcements and refocussing. The main advantage of the technique is the repeated reading which makes the content of the text familiar to the students and as diverse aspects are focussed at each stage to make the students think and thus stimulate and improve their reading skill.

3.5.0.Tools : As has been explained at the beginning of this chapter, the study has been carried through in three phases. The first phase relates to the identification of the components of the skill.. In the second phase, strategies.

for the development of reading skill are formulated and put to pilot test and in the third phase the finally selected strategies are adopted to promote reading skill in students in an experimental condition. During the second and third phase, necessary tools to measure the relevant variables are developed or selected and used. The details regarding the development of tools used in the second phase of the study are discussed in this section. Details regarding the tools used in the third phase (experimental phase) of the study are given under. Tools for experimental study " while describing the experimental part of the study.

This study was meant to develop a few strategies that would be helpful for improving the reading abilities of hearing impaired children. To plan out for strategies, initially one should find out the level of reading skills already acquired by the hearing impaired students in terms of components of reading skills so that the strategies can be planned out for the inadequate levels of reading skills. For this purpose a diagnostic test in reading is essential. All over the country, hearing impaired children have the option to learn only one language, as it is difficult for them to learn two languages in view of their communicative deficiencies due to hearing loss. In the State of Andhra Pradesh all hearing impaired learn only one language i.e. their regional language Telugu. As this was undertaken in the State of Andhra Pradesh a diagnostic reading comprehension test covering the three levels of reading

skill in Telugu language is essential. As reading tests meeting the requirements of this study was not readily available, the investigator developed a diagnostic reading test for hearing impaired children.

3.5.1. Development of diagnostic test in reading for Telugu language oriented hearing impaired students :

Reading is a Complex skill. Various authors and reserachers working in this area of research identified components of reading with different labels, all of which broadly fall under three major categories (1) Reading the lines. This means understanding what is explicitly stated in the passage (2) Reading between the lines which means understanding idcas implied in the passage through explicit or implicit inference (3) Finally reading beyond the lines indicate that understanding the passage from one's own World of knowledge, attitudes and interests. In this category the ideas given in the passage are evaluated based on a criterion or the ideas given in the passage are utilized for a novel purpose or novally organized which may result in a new perceptions or conceptual use. These two types of reading were termed critical and creative reading respectively. The investigator considered only these three levels, while developing a diagnostic test in reading in Telugu for hearing impaired children in Andhra Pradesh State.

3.5.1.1. Selection of a passage: Reading is mainly cognitive process. Reading in the initial stages would be focussed on "learning to read" but it should not stop at this point, if an individual has to develop his academic talents. It should continue to develop into "reading to learn which means developing one's own higher thinking and cognitive levels. For any one to think at higher levels of understanding the selected passage should be easy enough for understanding in terms of vocabulary and style of presentation (i.e sentence construction). To identify the readability level of a passage there are various methods adopted in other countries but in India that much of sophistication has not developed especially in Telugu language. However it is generally recommended to identify the reading level of a passage, for a student functioning on a specific grade level is to ask an experienced teacher who teaches that grade or confer with the schools' reading specialist. Israelite (1988) supports the use of using other professionals and the students themselves to identify appropriate materials. She contended that conventional measures of readability are too limited in scope to account for the complex interacting factors that influence text comprehensibility. She suggested that the most widely recommended alternative to readability formulas is the informed judgement of writers, editors, classroom teachers, and the readers themselves. Hence IX class teachers of hearing impaired students were consulted to find out about their reading

interests, reading habits. As per their advise, the popular Telugu magazine, which was regularly read by these students was chosen for selection of a passage. Four short stories were selected from this magazine called Balamitra. These passages were given to teachers to rate the reading levels of these passages to the IX class students. Five teachers who were teaching IX class hearing impaired children in the school were asked to assess the reading levels of these four passages. The ratings of the teachers were taken on two dimensions (1) Difficulty level of the passage (2) Interest level to the students; for each dimension three ratings were given as follows.

- | | | | |
|-------------------|-------------|---------|--------------------|
| 1. Reading level | Easy | Average | Difficult |
| 2. Interest level | Interesting | Average | Not
Interesting |

These ratings were scored by giving '2' points for easy '1' point for average and '0' for difficult in reading level and '2' for interesting, '1' for average and '0' for not interesting. The ratings of the teachers were averaged for all the passages. The passage with highest score on two levels was identified as the suitable passage for developing diagnostic reading test. Because, to assess the reading levels of the students, first of all the students must be able to read the passage with understanding. To motivate the students to read the passage till the end, the passage should be interesting to the students. The following are the

ratings given by five teachers for four passages identified for reading test construction.

Table No : 3.3 Frequencies of the teachers ratings on the four selected passages and their total score for each passage.

Passage	Frequencies			Frequencies				Total score
	Easy 2	Aver- age 1	Diffi- cult 0	Total score	interst- ing	aver- age	not inter- esting	
1. Passage I	III	II		8	II	III		7
2. Passage II	IIII	I		9	IIII	I		9
3. Passage III	III	I	I	7	I	II	II	4
4. Passage IV	I	I	III	3	I	I	III	3

From the table given above, it can be understood, that IIInd passage appears to be comparatively more easy and interesting to the students as per the teachers assessment.

These four passages were also given to 10 students of hearing impaired students and they were asked to rate which of these pasages are very easy and interesting to them. The passage which was identified as very easy and intresting by the maximum number of students was selected. Among ten students, seven students said that the IIInd passage was very easy and interesting. Interestingly the students assessment and the teachers assessment correlated well which means

ratings given by five teachers for four passages identified for reading test construction.

Table No :3.3 Frequencies of the teachers ratings on the four selected passages and their total score for each passage.

Passage	Frequencies			Frequencies				Total score
	Easy	Aver- age	Diffi- cult	Total score	interst- ing	aver- age	not inter- esting	
	2	1	0					
1. Passage I	III	II		8	II	III		7
2. PassageII	IIII	I		9	IIII	I		9
3. PassageIII	III	I	I	7	I	II	II	4
4. Passage IV	I	I	III	3	I	I	III	3

From the table given above, it can be understood, that IInd passage appears to be comparetively more easy and interesting to the students as per the teachers assessment.

These four passages were also given to 10 students of hearing impaired students and they were asked to rate which of these pasages are very easy and interesting to them. The passage which was identified as very easy and intresting by the maximum number of students was seleoted. Among ten students, seven students said that the IInd passage was very easy and interesting. Interestingly the students assessment and the teachers assessment correlated well which means

teachers are good in their judgement. Hence this passage was taken for constructing the diagnostic test.

3.5.1.2. Pilot Study : The passage was thoroughly read by the investigator and questions were framed as per the identified levels. Objective type of questions were framed to test the reading levels of students. Initially 30 questions were framed at literal level i.e reading the lines, 30 questions were framed at inferential level i.e reading between the lines and 8 questions were asked at higher cognitive levels namely critical and creative reading i.e reading beyond the lines. The draft of the reading test with the passage was sent to five judges for their opinion regarding the relevancy and adequacy of each items to test the components of the reading levels that it aims to test. On the basis of the options received from the judges minor modifications in the test items have been made and the test is finalized. The final version of the reading test consisted of 24 questions at literal level, 23 questions at inferential level and 4 questions at higher cognitive levels i.e critical and creative reading. The test thus covers all levels of reading skills as conceptualized for the study and therefore may be considered to have content validity. The test items were based on the components of the reading ability at each level, as such the test possess construct validity also. The test in its final form is given in the appendix I. The final form of the test

was administered to ten students of IX class hearing impaired students to find out the time taken by the students for answering the questions, and to make sure whether the format of the questions in terms of language used was clearly understood by the students. Based on the reactions of the students minor modifications in the language and format used was made for proper and better understanding. The students took approximately one hour to answer the test.

3.5.2. Description of the diagnostic test constructed: The selected passage for diagnostic test construction consists of 105 words, 13 sentences and 15 proper names and 351 syllables. The questions were given in six sections. In the first section 25 questions were given in the form of multiple choice questions. The second section consists of 20 true or false type questions where a statement was given. The student has to identify whether the given statement was true or false as per the story. If false, the student has to give the right form of the statement and substantiate his\her answer with the right form of the statement, wherever necessary. The student was given additional mark for his\her correction. There were 10 true and 10 false items which were mixed up and given. These statements were not reproduced from the passage. Only the idea of the story was stated in a different format. In the third section 5 short answer questions were given. While answering this section, the students were permitted to look into the passage and answer. Answers to these questions cannot copied directly from the passage, certain

the structure of the sentence would be necessary. The fourth question tested their ability to sequence the ideas in the order of the story through jumbling sentences. The fifth section focussed on the summarizing ability of the students. Three summaries of the passage were given. The student has to identify the passage which gives the complete summary of the passage amongst the three given summaries. The sixth section asks the students to complete the story in three positions. In the first passage, the first part of the story was missed. The student has to read the second part and based on that information, he/she has to complete the first part of the story; in the second passage a part of the middle story was left out and the students have to take the help of the first and last part of the story for completing the middle part. In the last passage, last part of the story was missed. The three passages presented in this section, though follows the story of the given passage, do not use the same vocabulary or sentences completely. While answering all these questions the students were permitted to read the story given as many times as he/she wants and whenever he/she wants it. Thus the finalized diagnostic test for assessing the reading levels of hearing impaired students consisted of 55 questions at different levels of comprehension namely, literal, inferential and critical or creative aspects of reading.

3.5.3. Development of the strategies : Based on the components of the reading levels, certain strategies were formulated to put to empirical test to find out the feasibility of the strategies to develop reading levels in students. Strategies under literal and inferential level were selected and questions were framed on the various components of the skill under literal and inferential level. Five complex sentences were selected and questions were framed on these sentences focussing on the literal and inferential aspects of the idea expressed in the sentences and they were taught to children mainly through reading questioning, reading and questioning strategies in the class. This test was also sent for jury's opinion before finalization. The details regarding the components taught, number of test items for each ability were furnished in the table 3.4

Table 3.4 Strategies tried out at literal and inferential levels

Sentences	Literal	Inferential
1.	Identifying main idea, and details	Inferring explicit main idea
2.	Identifying main idea, relating main idea to details.	Inferring exact point
3.	Identifying facts, identifying the purpose Relating main idea to the purpose.	Inferring explicit details
4.	Identifying details, purpose, main idea	Inferring explicit details main idea

- | | | |
|----|---|---|
| 5. | Identifying the main idea, facts, purpose and relating main idea and purpose. | Inferring exact points inferring purpose. |
|----|---|---|

It was observed that students were able to improve their literal and inferential skill with guidance. The following table gives their improvement in different skills during six days of teaching.

Table 3.5 The improvement of reading levels in the students

Reading level	Reading Component	% in the beginning	% at the end	Difference in %
1. Lateral level	1. Identifying main idea	48.23	55.44	7.21%
	2. Identifying details	15.31	26.42	11.11
	3. Identifying purpose	10.32	15.31	4.99
	4. Relating main idea to the purpose	5.21	7.41	2.20
	5. Relating details to the purpose	6.42	9.32	2.90
1. Inferential level	1. Inferring explicit main idea	12.86	20.85	7.99
	2. Inferring explicit details	17.92	22.41	4.49
	3. Inferring Exact points	13.24	19.73	6.49
	4. Inferring purpose	10.23	14.26	4.03

3.5.4. Reading tests in different school subjects

Reading skill is necessary for all subjects. But neither the teacher nor the students in the present educational environment can spare time to develop this reading skill separately. Moreover it is neither desirable nor necessary to develop in an isolated way. Any subject can be used as a medium or tool for developing reading skill in children, if proper planning and direction can be given. This method of using school subjects as a medium of developing reading skill would be advantageous to both teachers and students because they need not spend extra time for this purpose. If teachers can teach their subjects by making use of the potential reading abilities of the students, the teachers can effectively perform their role of facilitator in making the students learn by themselves. For students this method would be challenging; may be difficult in the initial stages but as they become accustomed to this process, it would be interesting. Hence school subjects were taken as tools for developing reading skill in students.

Reading tests were constructed in four school subjects namely Telugu, Maths, Biological Science and social studies. In each of these school subjects, prescribed text books were studied and a unit which was not taught by the teacher at the time of experimental study, was identified. These units in each subject were taken parawise and questions were framed to focus the various components of

reading skill at different levels. Then they were shown to the jury for opinion regarding the coverage of the reading components at different levels and also to the concerned teachers for the coverage of the subject matter. Thus the reading test in each subject area for pre and post test was finalized. The validity of the test was established through jury and concerned subject teacher's opinion. The reliability was tested using the split - half method. The reliability coefficient for the full test works out to 85. Thus six reading tests were constructed and used for various purposes at different phases of the study. Details regarding the administration of these test were discussed under "sample" of this chapter.

3.6. Tools for Experimental Study: Reading is closely related to intelligence as measured by tests (Robison 1961, Gray 1964). There were studies which showed that perception, concept development, cognitive clarity and language development were important for reading (Forrester 1976, Downing 1978 Singeton 1977, Atley 1983) Studies also showed that reading may be affected by syntactic complexity, semantic familiarity, interaction cues (Stick and Mutchie (1976)). Shipky and McFarlane suggested that assisting children with the development of basic semantic, morphologic, syntactic and/or phonologic concepts, ensuring opportunities for children to use short term memory to occur, teaching redundancy for both oral written language were important for facilitating reading development.

Studies also revealed that school and home environment have a place in the development of the reading skill in the children. (Kemfe 1989, Kepta and Check 1987, Jean and Mason 1986). Some researchers also focussed on the cognitive aspects related to reading comprehension. (Lasasso and Savvidas (1985), Berchia (1985), Craiz and Gordon (1988), Gribb 1989).

In view of these studies a few tests were developed to find out the correlation of some of these cognitive aspects such as identification of rhymes, rhyme generation, sentence acceptance, sentence correction reading awareness, short term memory, identification of equivalent meaning; one more passage was identified for assessing the students syntactic ability through cloze procedure. Description of the tools developed or used for the experimental group was described below.

3.6.1. Rhyme identification :

In this test, the students were asked to identify the pair of words which have same sound at the end of the word. This test indicates the students auditory knowledge at the lexical level. Twenty pairs of words were given, out of which only 10 pairs would rhyme. 10 pairs were non rhyming words. The students were asked to underline only the rhyming pairs.

3.6.2. Rhyme generation : In this test the students ability to write the rhyming words for the given stimulus word was tested. Twenty stimulus words were given and the students were asked to write the rhyming words for each stimulus word. This test indicates the ability of the students in identifying rhyming sounds.

3.6.3. Syllable segmentation : In this test the students were asked to form a new word by deleting one of the syllable from the given stimulus word. For eg: the word 'sanāgalu' (సాగలు). From this word if the syllable 'Sa' (సా) is deleted, the remaining letters give a new word called 'Nāgalu' (నాగలు) which means "jewellery". In this test also 20 such stimulus words given and the students were asked to form a new word by deleting one syllable either in the beginning, middle or at the end. This test indicates students ability to segment the syllable at the appropriate point for construction of new word.

3.6.4. Compound Word segmentation : In this test a compound word was given and the student was asked to split the word at the appropriate point according to the meaning of the word. For eg: "Panasapandu" (పానాపండు). This word was given without gap in the letters. The student has to split the word as Panasa (పానా) Pandu (పండు). If the student was able to do it, he/she has the cognitive ability to identify the root word even from inflections.

3.6.5. Compound word identification: In this test a compound word was embedded in a sentence. The embedded compound word has to be identified by the students according to the meaning of the sentence; there would be possibility for the compound word to read as two different words; but if that was done, the meaning of the sentence would be affected for eg: " Miriyalu podi cheyyi " (మిరియాల పొడి చేయి). In this sentence the embedded compound word is "Mirriyala podi" . If the student does not understand the meaning of the sentence properly, there is possibility that the student can split the compound word as "Mirriyala podi" which will not go with the verb Cheyyi: " meaning to do". This type of test would assess the students cognition at three levels of sentence understanding namely lexical, syntax and semantic levels. This test consists of 25 items.

3.6.6. Morphosyntactic and lexical awareness : This test aims to assess the students awareness in terms of morphemes, and syntax and lexis. This test was constructed in the form of filling in the blanks. A sentence is given with a blank and two words were given in the bracket for filling up the blanks. Only one of these two words would fit in the blank based on the meaning. The choices given in the words were only "root words. As per the context of the sentence the child has to make necessary changes in the words in the form of plurals, case makers etc. Thus this test not only tests the students' ability to select the appropriate words for

the sentence, but also indicates students ability to use appropriate inflections for changing the word suitably to the context. Hence this test would assess the students ability at morpheme, syntax and lexical levels. 50 sentences were given in this test covering important syntactical structures of Telugu language such as plurals, gender number, case markers, tense etc.

3.6.7. Sentence acceptance : This test assesses the students ability to identify the correct form of the sentence which in turn means his\her knowledge of syntax or sentence construction was good. In this test, 50 sentences were given, out of which 25 were with wrong sentence construction at different points of the sentence. The student was asked to "tick" whether the given sentence was correct or not.

3.6.8. Sentence Correction : In this test, as in the case of sentence acceptability, 50 sentences were given. All these sentences were wrongly constructed at some point of the sentence. The student has to identify the wrongly written word, also correct, in accordance with the sentence meaning. The mistakes in the sentence may be like the jumbled word order, wrong case markers, wrong tense form, wrong negative markers etc. This test focusses on students understanding of various structure in the language in sentence construction. This means the students understanding of syntactical structure and his\her ability to use it could be assessed from this test.

3.6.9. Short term memory : Memory is important for any one and it is much more so for the hearing impaired because, their memory is assumed to be weak due to lack of appropriate and timely reinforcement through auditory channel. Memory especially short term memory is essential at the initial stage of language acquisition for any individual. If this short-term memory is good, the individual can develop his long term memory through number of exercises that transfer the short term memory into long term memory. This is also one of the cognitive dimensions that should be taken care of for developing reading skill in hearing impaired children. Hence this task was given to students to find out the relationship of reading skill and short term memory. In this test the child was shown a set of stimulus words in which two words rhyme, other two words would not rhyme. These sets of words were shown only for one second. Then the students were asked to write the words they have been shown, immediately. The stimulus words would be covered with a paper when the students are writing the words they have seen. Thus this test indicates the capacity of short term memory of the students.

3.6.10. Reading comprehension test : A reading comprehension test used for identifying the levels of reading comprehension of all ninth standard hearing impaired students was also given for assessing the reading comprehension levels of this experimental group.

3.6.11. Identification of equivalent meaning : A test was designed to assess the students ability to identify equivalent meaning for a sentence, from the given meanings as this skill was very much essential in developing reading comprehension at different levels. The situations used in these sentences were very familiar common and day to day living situations known to this age group children.

3.6.12 & 13. Cloze test : Two stories from a popular magazine were taken and cloze test was constructed deleting every 7th word, leaving first paragraph for understanding of the story initially. Twenty blanks were given which focus different structures of Telugu language. As cloze test was considered efficient in identifying syntactic predictive ability of the students in reading comprehension, this test was constructed for the experimental groups.

3.6.14. Reproduction of a story : A small story was selected from a Telugu popular magazine. The students were asked to read the story and write the essence of the story immediately without looking into the story. This test assesses the students ability to grasp and reproduce a story as this ability was very much essential for developing reading skill.

3.6.15. Index of Reading Awareness : A tool was constructed to identify the students reading awareness. This tool was constructed based on the tool constructed by Victoria, Grindley and McIntosh (1991). This tool consisted of twenty

items covering aspects of knowledge regulation, planning, evaluation necessary for developing reading skill. The items in the tool was finalized with jury opinion and was administered to a sample of 100 IX class normal children item analysis was done to finalize the tool. The reliability coefficient found to be 0.79 for this tool. As the items were approved by the jury, the tool can be said to have construct validity. These fifteen tests were sent to jury for judging the construct to be measured by them and then they were administered to normal children and split half reliability was calculated. The split half reliability was ranged for these tests from 0.71 to 0.89. Hence these tests can be said to have construct validity and reliability.

3.6.16. Intelligence test : Cattle's Intelligence test for adolescents in the non-verbal format was used for measuring the intellectual levels of the students.

3.6.17. Achievement test : Students achievement levels were taken from the quartely, half-yearly exams and it was averaged and taken as the achievement levels of the student as the students are all from the same class, same school taking the same examination at the same time, same day and as their answer scripts were valued by the same teacher.

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reading skill at different levels. Then they were shown to the jury for opinion regarding the coverage of the reading components at different levels and also to the concerned teachers for the coverage of the subject matter. Thus the reading test in each subject area for pre and post test was finalized. The validity of the test was established through jury and concerned subject teacher's opinion. The reliability was tested using the split - half method. The reliability coefficient for the full test works out to 85. Thus six reading tests were constructed and used for various purposes at different phases of the study. Details regarding the administration of these test were discussed under "sample" of this chapter.

3.6. Tools for Experimental Study: Reading is closely related to intelligence as measured by tests (Robison 1961, Gray 1964). There were studies which showed that perception, concept development, cognitive clarity and language development were important for reading (Forrester 1976, Downing 1978 Singeton 1977, Atley 1983) Studies also showed that reading may be affected by syntactic complexity, semantic familiarity, interaction cues (Stick and Mutchie (1976)). Shipky and McFarlane suggested that assisting children with the development of basic semantic, morphologic, syntactic and\ or phonologic concepts, ensuring opportunities for children to use short term memory to occur, teaching redundancy for both oral written language were important for facilitating reading development.

Studies also revealed that school and home environment have a place in the development of the reading skill in the children. (Kemfe 1989, Kepta and Check 1987, Jean and Mason 1986). Some researchers also focussed on the cognitive aspects related to reading comprehension. (Lasasso and Savvidas (1985), Berchia (1985), Craiz and Gordon (1988), Gribb 1989).

In view of these studies a few tests were developed to find out the correlation of some of these cognitive aspects such as identification of rhymes, rhyme generation, sentence acceptance, sentence correction reading awareness, short term memory, identification of equivalent meaning; one more passage was identified for assessing the students syntactic ability through cloze procedure. Description of the tools developed or used for the experimental group was described below.

3.6.1. Rhyme identification :

In this test, the students were asked to identify the pair of words which have same sound at the end of the word. This test indicates the students auditory knowledge at the lexical level. Twenty pairs of words were given, out of which only 10 pairs would rhyme. 10 pairs were non rhyming words. The students were asked to underline only the rhyming pairs.

3.6.2. Rhyme generation : In this test the students ability to write the rhyming words for the given stimulus word was tested. Twenty stimulus words were given and the students were asked to write the rhyming words for each stimulus word. This test indicates the ability of the students in identifying rhyming sounds.

3.6.3. Syllable segmentation : In this test the students were asked to form a new word by deleting one of the syllable from the given stimulus word. For eg: the word 'sanagalu' (సాగాలు). From this word if the syllable 'Sa' (శా) is deleted, the remaining letters give a new word called 'Nagalu' (నాగాలు) which means "jewellery". In this test also 20 such stimulus words given and the students were asked to form a new word by deleting one syllable either in the beginning, middle or at the end. This test indicates students ability to segment the syllable at the appropriate point for construction of new word.

3.6.4. Compound Word segmentation : In this test a compound word was given and the student was asked to split the word at the appropriate point according to the meaning of the word. For eg: "Panasapandu" (పానాసాపండు). This word was given without gap in the letters. The student has to split the word as Panasa (పానాసా) Pandu (పండు). If the student was able to do it, he/she has the cognitive ability to identify the root word even from inflections.

3.6.5. Compound word identification: In this test a compoundword was embedded in a sentence. The embedded compound word has to be identified by the students according to the meaning of the sentence; there would be possibility for the compound word to read as two different words; but if that was done, the meaning of the sentence would be affected for eg: " Miriyalu podi cheyyi " (మిరియాలపొడి చేయి). In this sentence the embedded compound word is "Mirriyala podi" . If the student does not understand the meaning of the sentence properly, there is possibility that the student can split the compound word as "Mirriyala podi" which will not go with the verb Cheyyi; " meaning to do". This type of test would assess the students cognition at three levels of sentence understanding namely lexical, syntax and semantic levels. This test consists of 25 items.

3.6.6. Morphogyntactic and lexical awareness : This test aims to assess the students awareness in terms of morphemes, and syntax and lexis. This test was constructed in the form of filling in the blanks. A sentence is given with a blank and two words were given in the bracket for filling up the blanks. Only one of these two words would fit in the blank based on the meaning. The choices given in the words were only "root words. As per the context of the sentence the child has to make necessary changes in the words in the form of plurals, case makers etc. Thus this test not only tests the students' ability to select the appropriate words for

the sentence, but also indicates students ability to use appropriate inflections for changing the word suitably to the context. Hence this test would assess the students ability at morpheme, syntax and lexical levels. 50 sentences were given in this test covering important syntactical structures of Telugu language such as plurals, gender number, case markers, tense etc.

3.6.7. Sentence acceptance : This test assesses the students ability to identify the correct form of the sentence which in turn means his\her knowledge of syntax or sentence construction was good. In this test, 50 sentences were given, out of which 25 were with wrong sentence construction at different points of the sentence. The student was asked to "tick" whether the given sentence was correct or not.

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3.6.18. Personal data : A personal data sheet was administered to students which elicits information about the family and its background. This data sheet consisted of the

following items (1) Name (2) Class (3) age (4) Parental education-both father and mother (5) Income (6) on set of hearing loss (7) Type of hearing loss (8) Speech problem (9) fathers occupation (10) Caste (11) Other instances of hearing loss in the family (12) age of admission into the school.

3.6.19. Hearing loss : Students' hearing loss at 500 Hz, 1000Hz 2,000 Hz levels for right and left ears were taken to study whether the hearing loss affects the development of reading skill in hearing impaired children.

3.6.20. Instructional modules : In each school subject instructional modules were prepared. Only four subjects were taken for this study. Telugu, Mathematics, Science, and Social Studies. In sciences also only biology units were taken. In each subject, a unit which had to be covered by the concerned teacher at the proposed time of the experiment was taken. These units were thoroughly studied by the investigator and split into different paragraphs based on the concepts presented, and questions at literal and inferential levels were constructed to stimulate students thinking. These questions were given as pre and post tests to assess the students reading ability before and after the treatment with strategies. All these questions were very short answer questions at different levels of understanding. All these questions cover the concepts to be taught in that particular subject as per the syllabus.

3.7. Sample As reading skills were very crucial at high school level, the investigator thought it useful to conduct this study on IX class hearing impaired students so that, the strategies developed would be useful to them for their future academic achievements. Hence IX class hearing impaired students in Andhra Pradesh were taken as the population for the study. This study initially aimed to find out the reading levels of IX class hearing impaired students in the State of Andhra Pradesh. Hence a survey was conducted to find out the initial level of reading of hearing impaired students at class IX. Only those students who were studying in special schools were considered for this study. Hence the sample for this study was purposive sample in the first stage. In Andhra Pradesh there were only nine special schools for hearing impaired children with high school sections. Two were in coastal region run by the government, three special schools were located in Rayalaseema region, run by private management, out of four schools situated in Telangana region, three were run by the government, the remaining one school was run by private management. All the students studying in the IXth class in these deaf schools were selected. 30 students were from coastal region, 48 students from Rayalaseema area and 64 students from Telangana area were taken. Totally 142 students were taken for diagnosing their reading levels. List of schools selected for the study was given below in Table No :3.6

Table No: 2.6 Sample taken for diagnosing the reading levels
of hearing impaired students at IX class level.

Name of the School	Place	No. of Students
<u>I. Andhra Region</u>		
1. Govt. School for the deaf	Baptla	20
2. Govt. High School for the deaf	Kakinada	10
Total		30
<u>II. Rayalaseema</u>		
3. Helen Keller School for the deaf	Cuddapah	8
4. CSI School for the deaf	Punganoor	20
5. S.V.School for the deaf	Tirupati	20
Total		48
<u>III. Telangana</u>		
6. Sweekar Special School for the deaf	Hyderabad	13
7. Govt. high School for the deaf	Malakpet Hyderabad	20
8. Govt. School for the deaf	Karimnagar	12
9. Govt. School for the deaf	Miriyalguda	19
Total		64
Total sample from three regions 30 + 48 + 64 = 142		

Phase II : the phase II study consists of the experimental design. For the experimental part of the study, the pre-test treatment post-test design was selected. The treatment was conceptually developed reading strategy for the development of reading abilities in children.

In the second stage, one of the schools of the hearing impaired was selected to try out the strategies developed to improve their reading levels. In the second stage also the selection of the school for the experimental study was purposive as there was only one school available in Tirupati, where the investigator was residing. As the experimental design planned requires a minimum of one month, it was not feasible to select schools outside the residence of the investigator. Hence the investigator selected the locally available school for the deaf and conducted the experiment. Therefore the sample at the second stage was also purposive. The class as a whole was taken for the study. Hence the sample was purposive at the school level and cluster at the class level.

3.8. Experimental Design : The taught group for the experimental purpose was selected on the basis of the availability of the schools i.e locally available school was selected. As there was only one school which offers schooling to deaf children in Tirupati. Hence this school was selected for the experimental study. The total number of children in the IX class was divided into two halves of almost equal ability, judged from their achievement levels

in each subject. One group was given treatment another group was kept as control group, where the lessons were taught in the ordinary regular routine way. For both the groups pre-test and post-test was given for each instructional module. The following were number of instructional modules developed in each subject.

3.7. Number of instructional modules levels of reading skills of practiced

Subject	No. of Instru- ctional	No. of questions asked				
		Lite- ral	Inferential Expli- cit	Impli- cit	Criti- cal	Creat- ive
1. Telugu	8	39	20	3	1	1
2. Science	15	80	11	4	1	2
3. Social Science	11	89	10	3	1	1
4. Maths	10	92	7	3	1	1

Questions in each module was prepared at each level and they were given for pre and post tests. At the beginning of the each module the Pre-test questions were given to assess their understanding in the concept to be presented. Same questions were again given to the students both for experimental and control group after the concept is being taught to the experimental group with reading strategies and for control group in the normal routine regular teaching. Apart from this reading tests in each subjects, the target

group both experimental and control groups were administered an intelligence test, tasks reflecting their cognitive level of development in language, personal data sheet indicating the socio-economic educational background of the students, mean achievement scores of the students in the quarterly and half yearly examination in the concerned subjects were collected for analysis

3.8.1. Treatment : As explained in the above sections one unit was selected in each subject, questions testing the reading ability of the students were framed and these questions were used in the pre-test and post test. For a day, only two or three modules were taken for the experimental group in one subject only ; once the teaching was over for the experimental group, the same concepts were taught to the control group children by the same teacher. Thus teacher variability was eliminated .

First the class was taken for the control group with pre and post tests. The students in the experimental group let off for play during this period. Soon after the lesson was over for the control group experimental group was taught the same concepts with pre and post tests. Only one class period was taken in a day i.e 45 mts duration was spent every day for both the groups in any one of the school subjects. For each subject approximately one week to 10 days were taken for finishing the unit taken. Hence the total instruction took approximately 35 days to complete. In the 45 mts duration the concepts were directly explained

to the students in the control group. Whereas in the experimental group the students were first of all asked to read a paragraph, then read the questions given below and answer them by looking into the paragraph without explaining the concept embedded. Each time the child feels difficult to answer, the child was asked to read the lines in the paragraph which gives the answer and then their attention was focussed on how to identify the key ideas or concepts of the sentences or paragraphs. Similarly the students were directed to the lines for reading and inferring meaning through promptings, clues, if necessary reframing of the questions. Once the students were able to give complete or partially correct answers, the students were given another sheet having the same paragraph with same questions but with answers provided for each questions. The students were again asked to read the paragraph, read the question and answers and justify or contradict whether the given answer was correct or not indicating the lines reflecting their idea through discussion. Final consensus was derived for the right answer for each question. These strategies were followed in each subject field. Increase in their reading ability was measured through pre test and post tests given to them.

3.8.2. Emerged strategy : The conceptualized strategies for different skills as described "under instructional techniques for the practice of strategies were implemented in the classroom situation and in practice some

modifications are made in identifying strategy and creative strategy.

Identifying strategy: In identifying strategy since the students were unable to identify the key word, key sentence and key idea of the paragraph after reading the paragraph, another step was introduced. The meaning of each sentence was given and students were asked to read the sentence in the paragraph which gives that meaning. Then they were asked to identify the key word, key sentence and key idea of the paragraph and then reason for their decision.

Creative strategy: In the conceptualized strategy the students were asked to suggest applications of the concept learned. But in practice, this tactic did not work with this particular group of students (as the students did not give any new examples). However, the investigator thinks that if the teacher gets response to this tactic, the teacher could include this step also in his/her strategy. The investigator also feels if there was no restrictions on time, the teacher could stimulate with prompts and cues and get appropriate responses from the children.

3.9. Statistics used :

Following were the statistics used to analyse the data collected

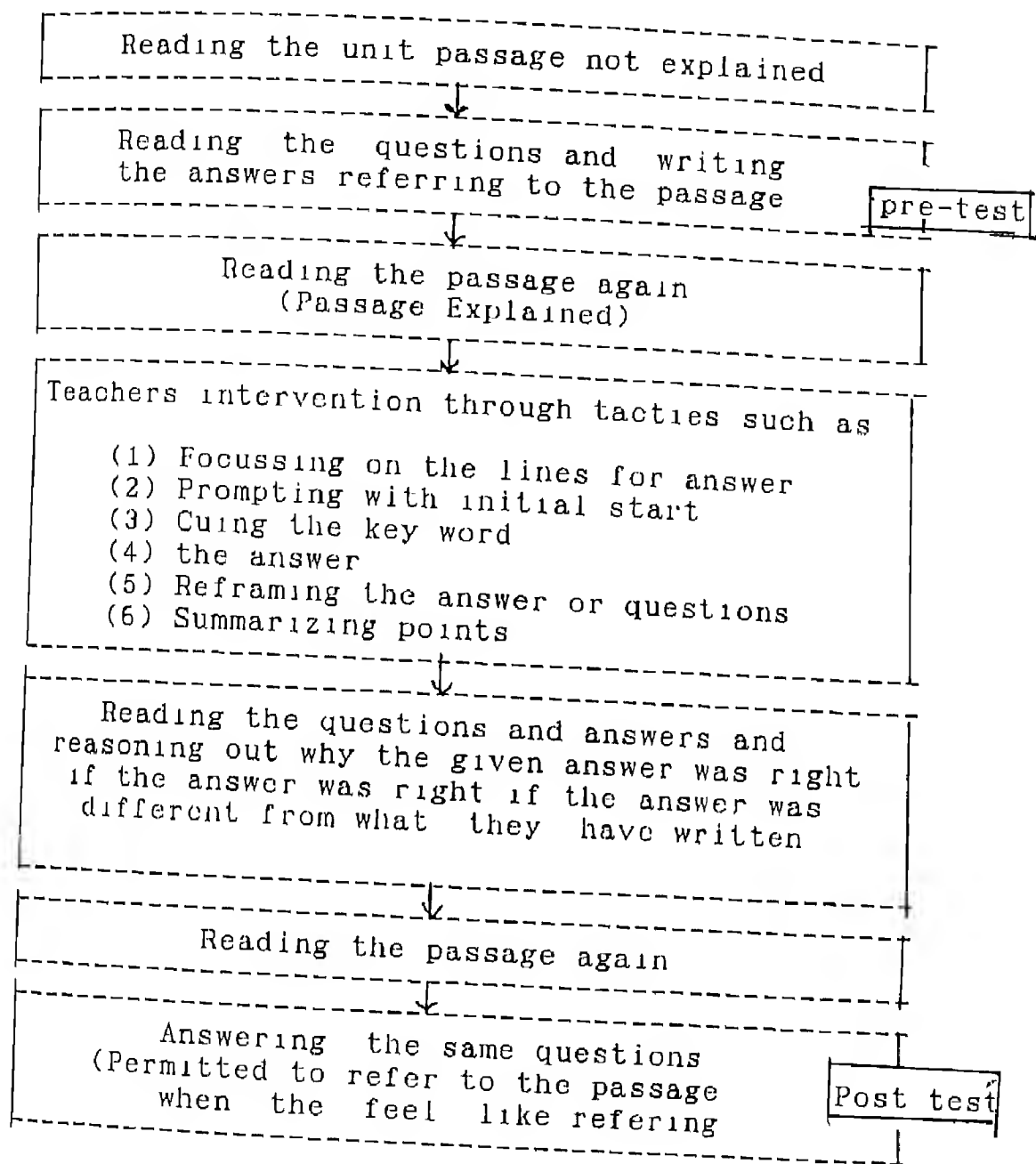
1. Mean and standard deviation for the sample survey group and the experimental group

2. Percentages for the difficulty level of the each component of the skill
3. 't' values for pre test, post test scores.
4. Correlations for tests measuring cognitive level of language and the students achievement scores.
5. Factor analysis of the reading levels and other variables, including hearing loss at three levels.
6. Split half method of reliability co-efficient.

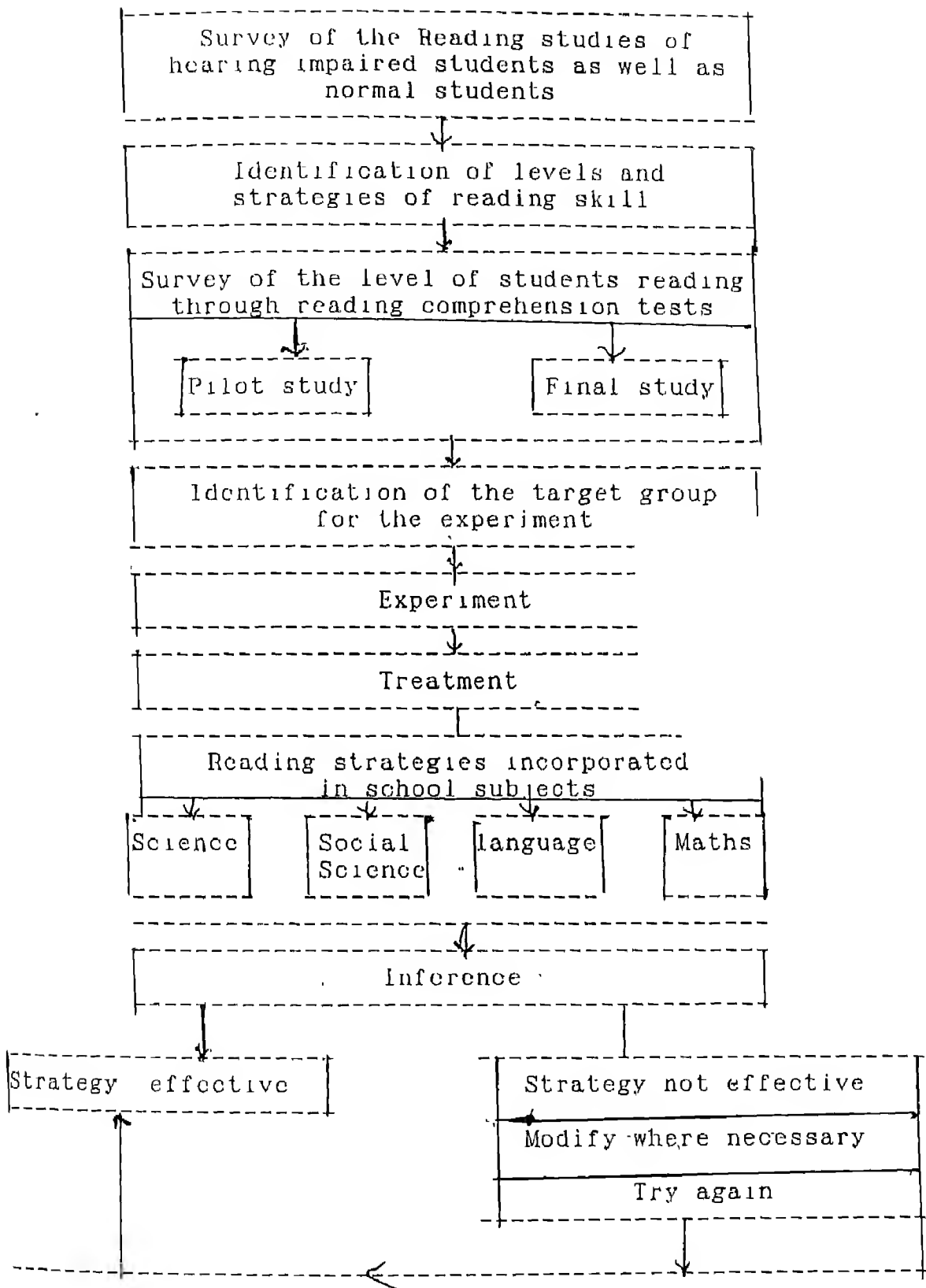
3.10. Conclusion:

Thus the investigator analysed the problem in terms of levels of the skill, undertook a survey cum experiment to develop reading ability of IXth standard students and analysed the data with appropriate statistics.

A. Flow chart for the experimental design :



Flow chart for the study



CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

The data collected as described in the previous chapter were analysed using the following statistics - Mean, standard deviation, percentages 't' values., correlation coefficient and factor analysis. The details were presented in this chapter.

4.0. Scheme of data analysis :

The collected data from the three phases of the study were analysed using relevant statistics starting from the simple descriptive analysis, and proceeds to correlational and differential analysis and finally to factor analysis.

Phase I Results : In the first phase a diagnostic reading test was constructed and administered to a sample of 142 IX standard hearing impaired students who were studying in different regions of Andhra Pradesh. The test covers 90% of the conceptualized reading ability. The percentage of students who gave correct answers were calculated. The scores were converted into percentages to find out the difficulty level of the items. The following table no 4.1 gives the mean percentage of students and their standard deviation in different schools and also region wise means and standard deviation.

Fig.2 Mean percentage of the students
in the different schools in the
diagnostic reading comprehension test

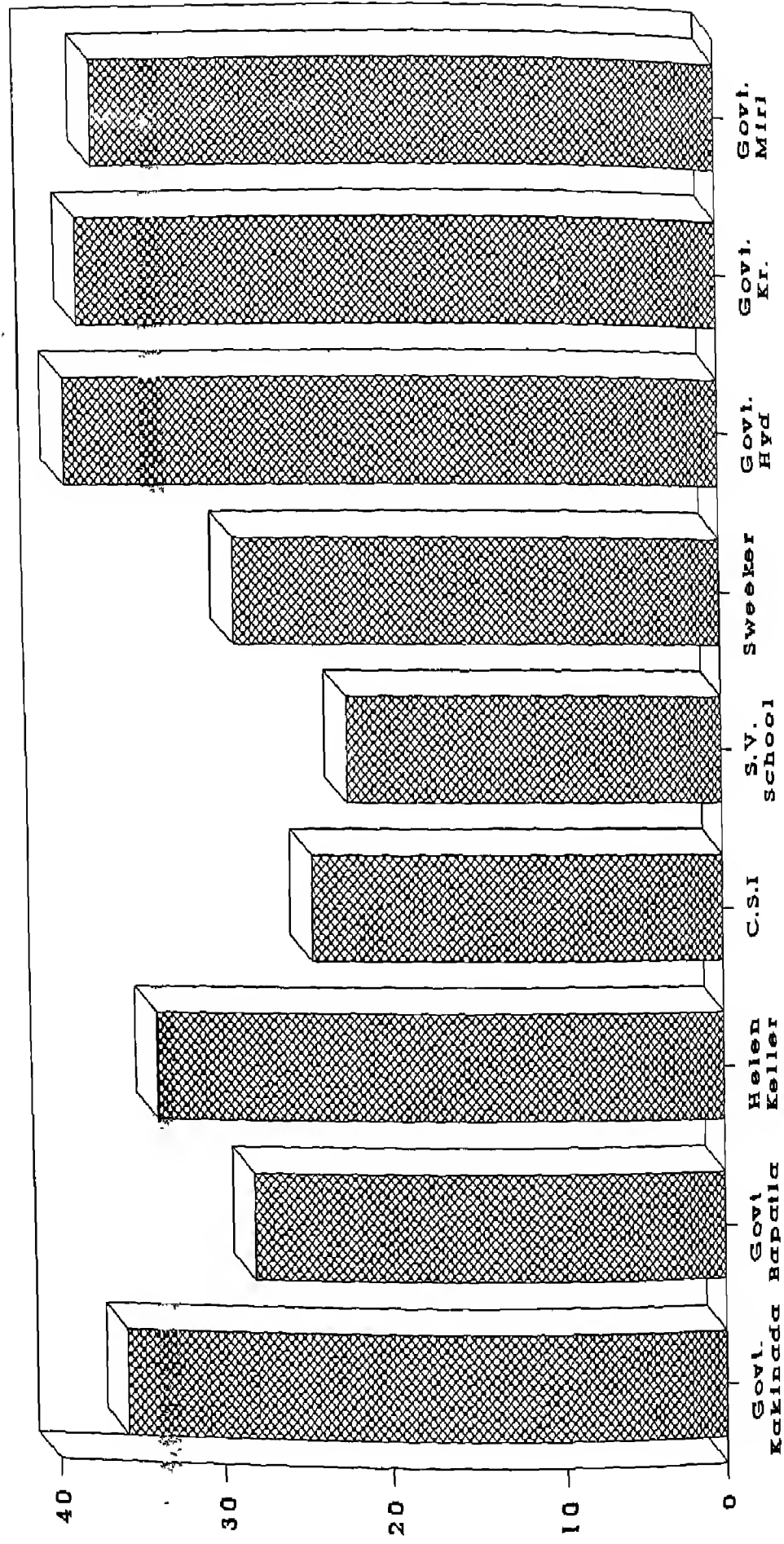


Fig. 3 Mean % of the students in different regions for the total sample in the diagnostic reading test

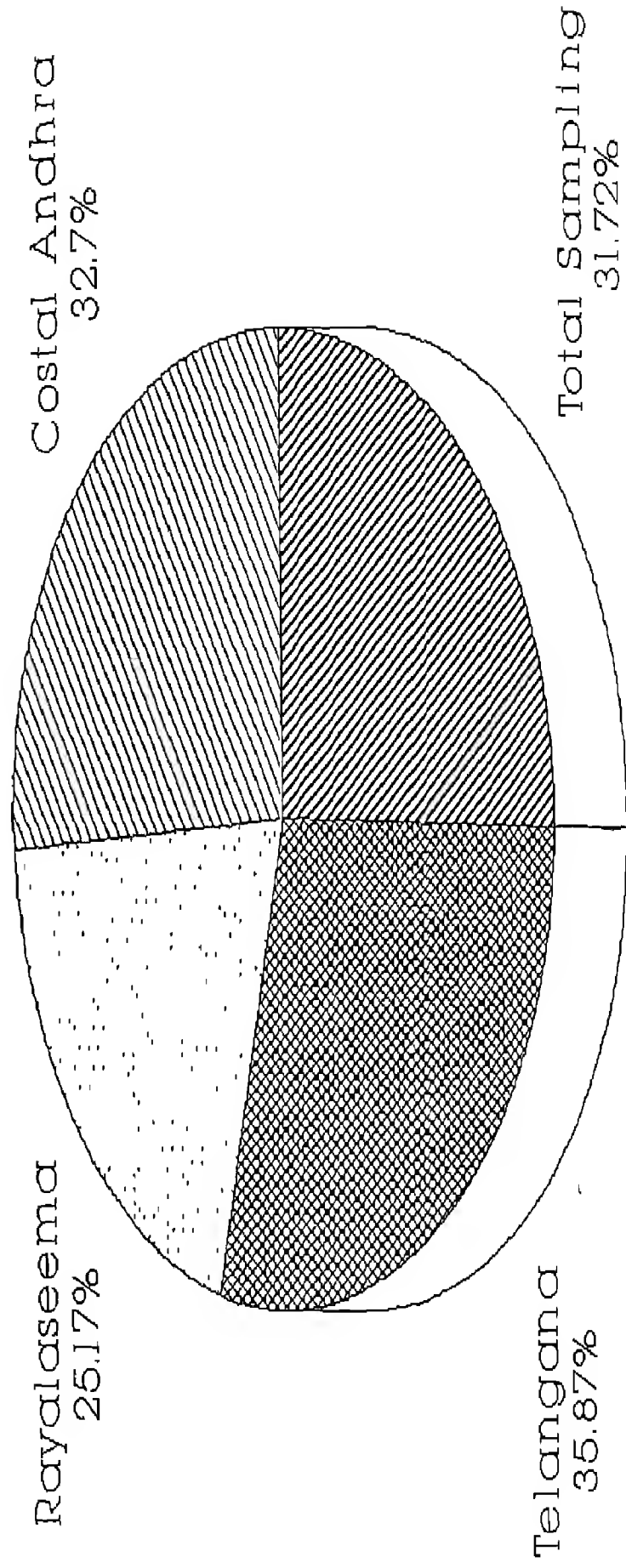


Table 4.1. Mean percentage and standard deviation values of the students in different schools and in different regions in the diagnostic reading comprehension test.

Schools	Region	Mean	S.D
1. Govt. High School for the deaf Kakinada	Andhra	35.8	8.10
2. Get school for the deaf Bapatla	Andhra	28.05	6.62
Andhra region		32.7	8.45
3. Helen keller School for the Deaf Cuddapa\h	Rayalaseema	33.75	5.97
4. C.S.I School for the Deaf Punganoor	Rayalaseema	24.5	8.66
5. S.V.School for the Deaf Tirupati	Rayalaseema	22.4	4.57
Rayalaseema region		25.17	7.845
6. Sweekar school Hyderabad	Telangana	28.92	17.83
7. Govt. School for deaf Malakpet	Telangana	38.75	13.00
8. Govt. School for the deaf Karim nagar	Telangana	37.85	
9. Govt. School for the deaf Miriyalaguda	Telangana	36.8	
Telangana Total		35.8	
Total sample mean & S.D		31.7	

From the table 1.1 it can be observed that amongst the students from nine schools, higher mean scores were observed in schools situated in Telangana region, next comes schools from Andhra region and lastly the students from Rayalaseema region. Variation was also appears to be high in schools from Telangana region compared to other schools from other two regions. This means the students reading comprehension levels appears to be high as well as quite varied in the students from Telangana region. The results also indicate that the students from government schools seems to have fared better than the students from private management schools. This means reading comprehension levels of students in government schools, seems to be better than the reading comprehension levels of students in privately managed schools. This in turn also implies that the students in government schools might be receiving better attention, coaching either by the teachers or by the parents than the efforts, received by the students of privately managed schools.

The over all mean score for the total sample in the diagnostic reading test was only 31.72 and the variation appears to be 11.60 which means the reading comprehension levels of hearing impaired children was quite low, not even reaching 32% level. The variation of 11.60 for a sample of 142 was quite high and indicates that the students were at different levels of reading comprehension in the diagnostic

reading comprehension tests which in turn means the group was quite heterogeneous in their abilities to read.

The IX class students' reading comprehension level ranged from 22.4% to 38.25% and variation ranged between 2.675 to 17.83. Highest mean value was observed in one of the schools from Rayalaseema region. In the case of variation both lowest and highest variations were observed in the schools from Telangana region.

Fig.4 Mean percentage of the students
in the different levels of reading
comprehension test

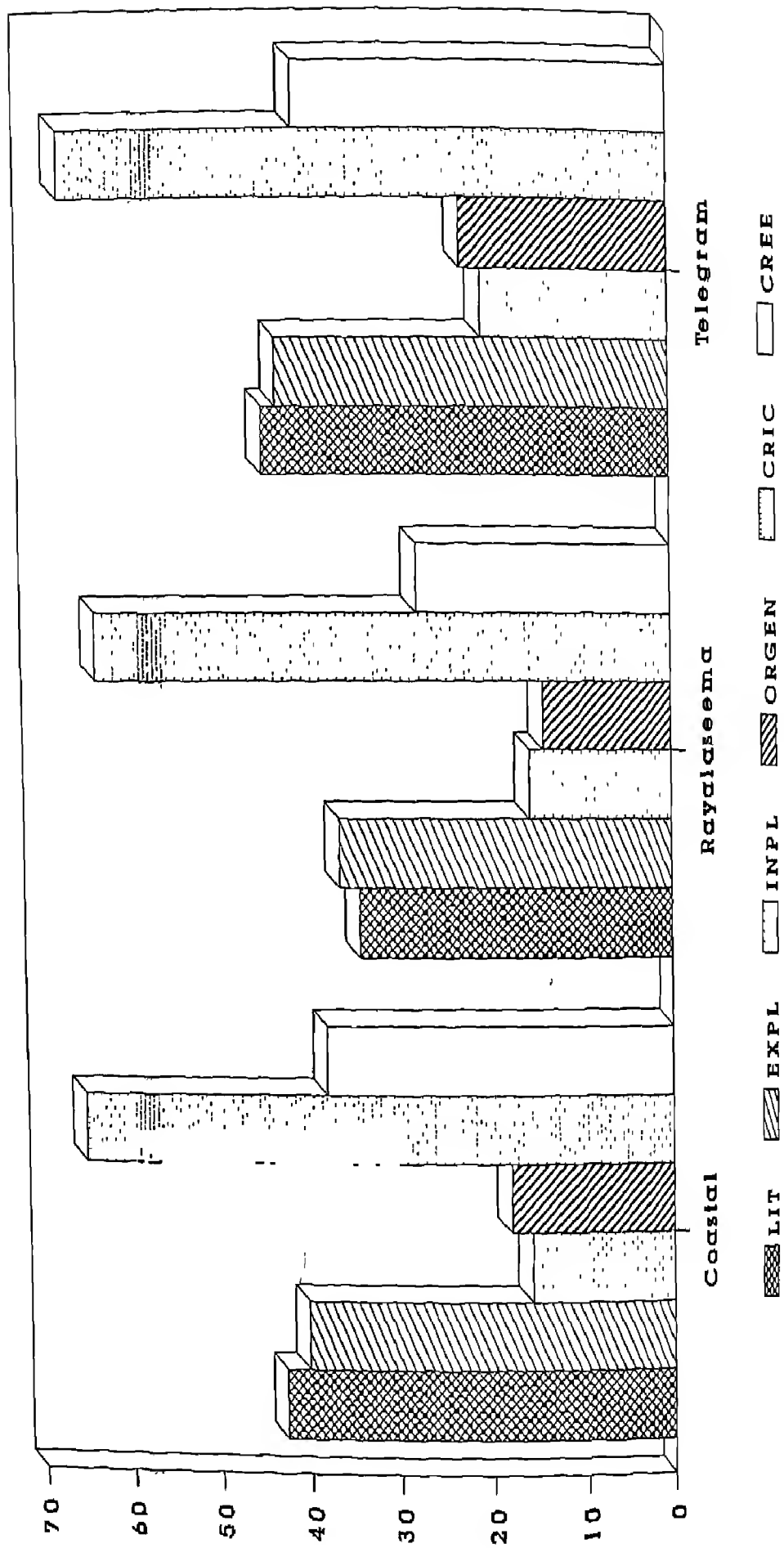


Table 4.2. Achievement levels of students in different levels of reading comprehension

	Literal	Explicit Inference	Implicit Inference	Organization	Critical	Creative
Total No. Quest-ions	26	13	16	1	4	5
1. Coastal Region No.30	Mean 11.3 % 42.62 S.D 3.05	5.23 40.23 1.00	3 96 15.84 2.31	2.7 18% 1.12	2.6 65% 1.11	4.36 28% 3.42
2. Rayala-sema No 48	Mean 8.92 34.30% S.D 3.16	4.75 36.54 1.47	4.00 16% 2.37	2.17 14.47 1.21	2.53 63.25 1.21	4.75 27.94 1.76
3. Telangana No. 64	Mean 11.62 44.69% S.D 4.73	5.60 43.08 2.15	5.20 20.8% 2.78	3.45 23% 2.50	2.67 66.75 1.2	6.98 41.06 4.43

4.1.1. Achievement levels of students in different levels of reading comprehension region and school

From the table 4.2, it can be observed that the performance of the students in each region at different levels of reading comprehension was quite varied. In general, in all three regions the performance pattern appears to be similar. Their performance level appears to be highest in critical questions, next came literal questions explicit inference, creative questions, implicit inference and finally organization. These results indicated that students appeared to be good in independent thinking as critical questions are questions that involve independent views on certain points. Next in order was their ability to answer correctly more number of literal questions. Ability to infer from explicit statements occupied third position, ability to think in a novel or creative way was their next order ability. Their ability to infer implicitly, and organize the ideas seems to be lowest. This means, hearing impaired students' were capable of reading at different levels, though their level was considerably low. In the first level i.e reading the lines, they were not very sensitive to the organizational aspect and in reading between the lines they were less sensitive to getting facts or opinions through implicit inference.

Performance range of students in different types questions given for
assessing difficulty levels of studnets - regionwise and schoolwise.

Type of Questions	Region			Total Sample
	Andhra	Telangana	Rayalaseema	
1. Details (literal)	6.67 - 96.67	9.38 - 95.31	8.33 - 87.5	11.35 - 93.16
2. Main idea (Implicit Inference)	0 - 33.33	7.81 - 5.0	14.58 - 31.25	14.13 - 30.42
3. Details (Explicit Inference)	6.67 - 93.33	20.32 - 59.38	8.33 - 43.75	14.44 - 48.47
4. Details Implicit inference	0.1 - 86.67	0 - 84.38	0 - 60.47	0.03 - 68.42
5. Critical	0 - 6.67	0. - 3.13	0 - 4.13	2.22 - 4.66
6. Creative	44.67 - 100	43.75 - 67.19	22.92 79.17	37.11 - 65.45
7. Organization	0 - 56.67	1.56 - 45.32	0 - 0.83	1.91 - 61.25
8. Summary	13.33	18.78	8.33	13.47 - 61.25

From the table 4.3 it can be inferred that in the total sample. Variation in students performance was highest in questions eliciting detailed information of the story at the literal level. (11.35 to 93.16). Next in order comes questions eliciting details through implicit inference questions, organization of story comes third in order in variation, explicit inference questions occupied 4th position followed by creative questions, eliciting main idea critical reading questions and lastly summarizing; lowest level of performance was observed in organization and the highest performance observed in literal questions. Regionwise performance was also followed similar pattern, which means the students might have felt the organization of the story most difficult and the literal questions most easiest. Wide variance in the students performance levels in different types of questions indicate that students abilities were quite different. Their maximum performance level did not reach even 5% level in critical reading, 15% in summarization and 35% in inferring main idea which means students need to be taught in these aspects in their academic exercises, as these aspects of reading are very much essential for academic prospects of hearing impaired students. The fact that their performance was better in creative reading indicates that the hearing impaired can do original thinking. Amongst the three regions the highest and lowest performance level was observed in Andhra region in all aspects of reading except three aspects:

creative reading summarization, and inferring main idea. In inferring main idea, the performance of students in Telangana region appears to be better where as in creative reading lowest and highest performance was observed in Rayalaseema region, in summarization also the students from Rayalaseema region performed very poorly.

Table 4.4 Schoolwise range of performance of students in different types of questions assessing reading abilities of students.

Reading aspect	Kaki-nada	Baptla	Sweekar	Malk-pet	Muriyal-gudem	Karimnagar	S.V Tirunur pati	Punga-nur	Cudda-pah
1. Details (lateral)	30-100	10-95	2.3-92.3	5.95	0-100	5.2-967	0-87.5	0-100	0-100
2. Main idea	0-30	10-40	7.9-62.2	20.65	8.3-75	10.5-73.6	16.67-33.33	0-30	0-26
3. Details (Explicit Inference)	0-40	0-50	7.6-65.0	0-90	0-100	5.2-57.8	12.5-43.75	0-40	0-12
4. Details (Implicit Inference)	0-100	10-85	0-68.5	0-90	0-91.6	0-94.7	0-80	0-75	0-100
5. Critical reading	0	0-10	0	0	0.5-31.5	0-35.13	0-5	0-5	0-5
6. Creative	50-100	23-100	38.4-61.5	10-80	31.5-83.3	26.3-100	0-79.17	35-100	12.5-100
7. Organization	0-80	0-45	0-38.4	0-50	0-16.6	0-73.6	0-75	0-90	0-100
8. Summary	0	20	15.3	-20	0	31.5	25	25	15

4.1.2 School wise range of performance of students in different types of questions :

From the above table 4.4 it can be observed that that the students performance level was Zero in four schools namely all three schools in Rayalaseema region and the school in Miriyalguda, which means the students were unable to get details from reading the text at literal level even for one question. Similarly in other aspects also zero performance was observed in three schools (two schools in Rayalaseema region and one school in Andhra region) in inferring main idea; In six schools (two schools in each region) similar performance was observed in explicitly inferring details. In all the schools there were students with zero performance in the case of questions eliciting details through implicit inference; similar was the performance for "organization of information and critical reading i.e zero performance observed in all schools. Even in case of inferring details through implicit inference, zero performance was observed in eight schools. Students were not able to do the summary in two schools. Only in the case of creative reading zero performance was observed in one school. This result indicates that the students were not given focussed training in any of the schools in reading aspects. Inspite of this lack of proper training their better performance in creative reading questions indicate that hearing impaired children were capable of creative thinking in reading.

Table 4.5 't' values computed for different regions in different components of the reading passage and its significant levels.

	Andhra Vs Rayalseema	Andhra Vs Telangana	Rayalaseema Vs Telangana
1. Literal	2.54* A>R	0.73	3.25 ** T>R
2. Explicit Inference	1.45 Ns	1.19Ns	2.29 *** T>R
3. Implicit Inference	0.098Ns	2.33* T>C	2.14 T>R
4. Organization	1.76 Ns	5.76 ** T>C	3.45** T>R
5. Critical reading	0.24 Ns	0.291 Ns	0.583 Ns
6. Crative	0.010 Ns	2.70**	2.71**
* 0.05 level significance Ns Not significant ** 0.01 level significant A Andhra region R Rayalseema region T Telangana region			

To find out whether the observed difference in the students performance was due to real difference in their abilities or due to chance factor 't' values and their significant levels for each aspect of reading between regions were computed. From the table 4.5 it can be observed that the performance of hearing impaired students in Andhra and Rayalseema region did not difer much in all aspects of reading except at literal level, where in the performance of Andhra students was better than the performance of

Rayalaseema region as significant 't' value was observed only at literal level. Between Andhra and Telangana the students performance levels differed in three aspects namely implicit inference, organization and creative reading. In all these three aspects the students from Telangana region fared better than students from Andhra region. Between Rayalaseema and Telangana, significant 't' values were observed in all aspects of reading except critical reading which means the abilities of students differed in these two regions and in all aspects, students abilities in Telangana region was better than the students abilities in Rayalaseema region.

On the whole the students in three regions did not differ in their performance levels only in critical reading. Students from Telangana region showed best performance and students from Rayalaseema region showed lowest performance levels where as students from Coastal Andhra region stands in between the performance levels of these two regions, though their performance was not significantly different from Rayalaseema region in all aspects except for literal level questions.

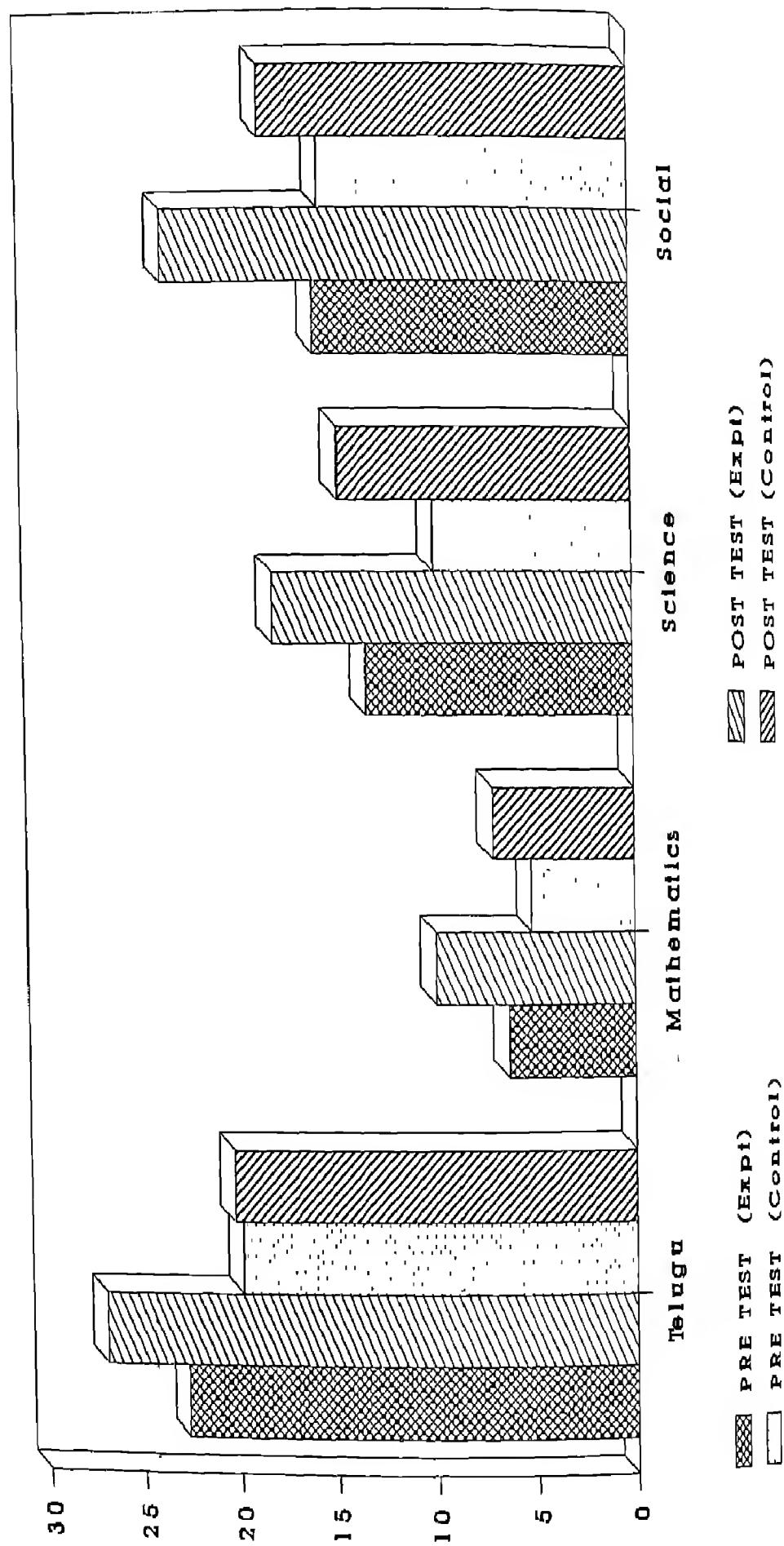
In brief the analysis of the diagnostic reading test for hearing impaired students indicated that the hearing impaired children were capable of reading at different levels, though their performance level was quite low. Explicit training is required to these children to increase

their level of understanding especially at implicit inference, organization critical reading and summarization and to strengthen their abilities to read at literal level, explicit inference and creative reading levels.

Phase II Experimental data analysis

4.2.1. Descriptive analysis : As described in the earlier chapter one of the schools for the hearing handicapped available in Tirupati was taken for experimental study. The target class i.e IX class students in the school were divided into two groups, one group chosen for experimental purpose, the second one kept for control group. Units selected from four subject text books i.e Telugu, Maths, Biological Science and social studies were taken for incorporating reading strategies in the units to be taught. Three levels of questions were incorporated. They were literal, explicit inference and Implicit inference. The Experimental group was taught with the help of instructional material prepared incorporating the reading strategies where as the control group had regular teaching method. Same pre-test and post- tests were given to both the groups. The following table

Fig.5 Mean score for pre test and post test for central and experimental group in different subjects



4.6. Mean and standard deviation scores for pre-test and post-test scores for both experimental group and control group.

Subjects	Experimental group				Control group			
	pre-test		Post-test		pre-test		post-test	
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
1.Telugu	22.66	3.52	26.91	6.03	19.84	3.06	20.23	2.57
2.Maths	6.41	1.44	10.00	0.81	5.23	2.22	7.15	2.98
3.Science	13.33	5.28	18.00	1.52	10.00	4.00	14.07	1.38
4.Social	15.83	3.62	23.50	3.33	15.53	3.78	18.53	3.25

From the table 4.6, it can be observed in both experimental and control groups, the performance appears to be better in the post-test. Variation appears to be highest in the post-test performance of students in Telugu language units and lowest in mathematics post-test.

However when 't' values were computed for pre-test performance of both experimental and control groups it was found that 't' values were not significant even at 0.05 level in any of the subjects which means the mean differences observed in these two groups in the pre-test performance were due to chance factor rather than the real difference in their performance in different subjects.

Similarly 't' values were computed for the mean differences observed in the post test performance of the two

groups. It was found that the 't' values were significant at 0.01 level in all subjects: The higher mean values observed in the experimental group indicated that the students performance was better in the experimental group than in the control group.

't' values were also calculated for the pre and post-test performance of the experimental group and the control group. The results revealed significant 't' values in all the subjects in the experimental group and indicated that the students in the experimental group performed better in the post tests. But in the case of control group, though higher mean values were observed in the post-test performance, the mean differences were not significant for any of the subjects which means that there was no real improvement in the pretest and post test performance of the controlled group.

From these results it can be inferred that the instructional material prepared incorporating the reading strategies improved students performance in all subjects. Table 4.7 't' values and their significant level for pre-test and pre-test scores of control and experimental group, post-test scores and post-test scores of control and experimental group and pre and post-test scores of control group and experimental group.

4.7. 't' values and their significant level for pre-test and post-test of control and Experimental group

Subjects	Control Vs Expt pre-test	Control Vs Expt post-test	Control group pre & post test	Expt group pre & post test
1. Telugu	2.14@	3.55**	0.33 @	3.23**
2. Maths	1.563@	6.78**	1.79 @	7.83**
3. Science	1.79 @	4.85**	2.12 @	3.19**
4. Social	0.202@	3.78**	2.08 @	5.62**

@ Not significant

** Significant at 0.01 level

Experimental and control groups achievement was compared in term of different levels of understanding in reading. The results showed that in control group, except in Maths, the students performance was significantly better in understanding literal level questions in the post-test in all other subjects. Students also fared better in explicit inference in the post-tests for Telugu, Maths. However in the case of implicit inference, they did not showed better performance in the post-test in any of the subjects as the 't' values were not significant for these questions in the pre and post-test performance. But in the case of experimental group in all subjects at all levels i.e literal, explicit inference and implicit inference, the students performance was better in the post test performance as the computed 't' values for pre and post test performance were significant at 0.01 level in all subjects and at all levels Table 4.7 gives the 't' values at different levels of comprehension for both control and experimental group.

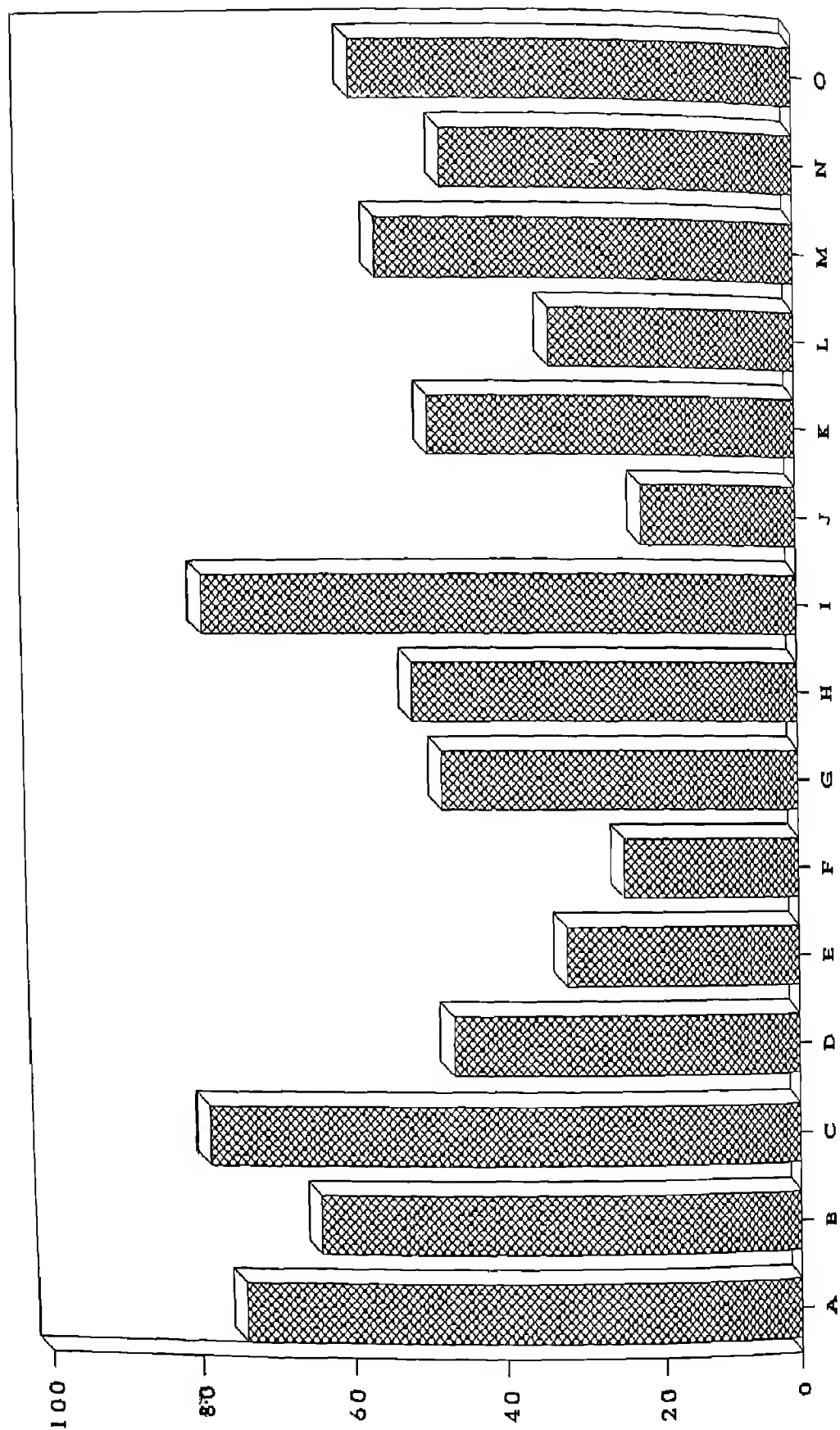
Table 4. 8. 't' values at different levels of comprehension for both experimental group

Subjects	Control group			Experimental group		
	Literal	Explicit Inference	Implicit Inference	Literal	Explicit Inference	Implicit Inference
1. Telugu	2.27@	3.26**	1.13@	3.53**	3.28**	3.48**
2. Maths	3.2**	4.69**	2.12@	3.75**	3.75**	4.59**
3. Science	2.24@	1.75@	2.17@	5.13**	6.41**	4.42**
4. Social	2.19@	1.52@	1.92@	3.59**	2.62**	2.87**

@ Not Significant

** Significant at 0.01 level

Fig.6 Mean percentage of the target
students in various tests
group



From the table 4.8 it can be inferred that the reading skills of the experimental group has improved at all levels which means that the strategies incorporated in the instructional material might have helped the students to improve their reading skills. This in turn means that if hearing impaired students are given opportunities for reading with focussed direction, they can improve their reading skills. This type of focussed direction can be practised in any of the school subjects along with teaching of the lesson.

Table 4.9. Mean and standard deviation for the various tests administered to the target group and their rank order of performance.

Name of the test		Max.	Mean	S.D	Perce- tages	Rank order Mean	Rank order S.D
1.	Rhyme generation	20	16.8	1.83	74.0	III	XIV
2.	Rhyme Identifi- cation	10	6.3	1.23	63	IV	XVII
3.	Syllable seg- mentation	20	15.66	2.92	78.30	II	VII
4.	Compound word segmentation	20	9.33	1.79	46.65	XI	XV
5.	Compound word identification	25	8.06	2.39	32.24	XII	XI
6.	Morphosyntactic lexical awareness	50	12.53	2.77	25.06	XIII	VIII

7. Sentence Acceptance	50	24.2	3.37	48.4	IX	VI
8. Sentence correction	50	25.86	2.70	51.72	VII	IX
9. Short term memory	20	15.73	1.95	78.65	I	XIII
10. Reading comprehension passage with questions objective type	100	22.4	4.57	22.4	XVI	V
11. Identification of equivalent meaning	20	9.93	1.67	49.65	VIII	XIV
12. Cloze reading passage I	25	6.00	2.12	24.00	XV	XII
13. Cloze reading passage II	50	28	6.98	56.00	VI	IV
14. Reading passage for reproduction	25	6.20	2.50	24.80	XIV	X
15. Reading Awareness Index	40	19	4.71	47.5	X	III
16. I Q	-	72.86	13.62	-	-	II
17. Achievement	100	59.07	29.38	-	V	I

4.2.2. Analysis of the measures of other variables

From the table 4.9 it can be inferred that the mean IQ level of the target students as measured from the culture fair Cattell's intelligent test was 72.86 which means they were slightly below average in intelligence. The variation in the I.Q test appears to be highest compared to other test which means the groups intellectual ability was quite varied.

Students performance was above fifty per cent level in six tests namely short term memory, Rhyme generation, rhyme identification, syllable segmentation, cloze passage II and sentence correction. In four other tests namely sentence acceptance, compound word segmentation, identification of equivalent meaning and reading awareness index, their achievement level ranged above 46% and below 50%. In the remaining six tests, namely compound word identification, morphosyntactic lexical awareness, reading comprehension test with objective questions, cloze passage I and reading passage for reproduction, the performance of the students did not reach even 35% level.

The highest achievement in short term memory test indicates that the students are good in their short term memory (78.65%). Higher achievement scores in rhyme generation (74%) syllable segmentation (78.30%) rhyme identification (63%) indicates that students were sensitive to syllable boundaries and rhyming sounds in the language.

Their better performance in cloze passage II (56%) and sentence correction (51.72%) also indicates their fair understanding of the syntactical context of the passage. Average performance levels of students in tests such as compound word segmentation, sentence acceptance, Identification of equivalent meaning, reading awareness indicates that students abilities need to be strengthened in these aspects for their better academic achievement. Low performance observed in the area of compound word identification, cloze passage II, morphosyntactical lexical awareness, reading passage with objective test questions, and reading passage for reproduction indicates that students have difficulty in identifying compound word, understanding the changes occurring in the words in the context, understanding a reading passage and reproducing it with important points.

Of all the test given, students performance was very much varied in cloze passage I₁ (sd.6.98) next, comes reading awareness Index followed by reading comprehension test with objective type questions, sentence acceptance, syllable segmentation, morphosyntactic lexical awareness, sentence correction, reading passage for reproduction, compound word identification, cloze passage I, short term memory, rhyme generation, compound word segmentation, identification of equivalent meaning and finally rhyme identification. These results indicates that the students

understanding of the individual words appears to be better than their understanding in the context which needs to be focussed in their academic life.

However their regular achievement level appears to be 59.07% and the students varied very widely in their achievement, as variation was 7.59 for a sample of 25 students which indicates that students differ very widely in their abilities. One more interesting observation that can be made from their achievement score was that the mean performance of the students in this group was above 50% level i.e above average level. This was not been reflected in the intelligence test given to them where their performance level was shown to be below average 72.86 I.Q. This means the intelligence test scores cannot be taken as a measure of performance abilities of hearing impaired children of this group.

• Hearing loss ; The students hearing loss ranged from 75 to 100 at 500Hz, 80 to 110 at 1000 Hz and 85 to 110 at 2000 Hz for both right and left ears. This means the students have profound hearing loss. These children had hearing loss right from the birth. Their hearing loss was sensory neural.

4.2.3.General back ground of the students : There were 10 girls and 15 boys in the experimental group. Their age ranged from 16-20 yrs. All the students admitted into the school very late i.e from seventh year to 9th year. Except in three cases in all other cases, there was no other person

suffering from hearing loss. Amongst these children eleven members were from forward caste, another eleven members were from backward community and the three students were from SC category. Amongst these children, one student does not possess any sibling. Two students have siblings with below normal condition. All the rest have normal siblings. Seven of these students' parents' income was above 15,000; the remaining have below 15000 income per year. Except one candidates' mother, all others were house wives' only. One candidates' mother was a coolie. Which means the students' does not get proper assistance from their mother. With regard to fathers' occupation, six were doing daily wages, eight were having agriculture work or business, six were having IV class employment and the remaining three were doing job at middle level. Only two mothers were educated up to X class, one was educated up to intermediate, two were studied up to 7th class, four were studied upto 5th class , and two have studied up to three only. The remaining mothers were illiterates only. In the case of fathers, only one father had degree, another had education upto inter, six others had studied up to tenth level. Three fathers had education at seventh class level and one father studied up to 5th class level. The remaining fathers were illiterates. This means the socio economic background of the students were very poor and even the educational background of the parents were very low. This in turn means the students may not be receiving required assistance for academic progress

in their homes which might be the probable reason for low achievement level of students in various reading passages.

4.3 Comparative analysis: To find out if there was any difference in the performance levels of students based on hearing loss, the experimental sample was divided into two groups as follows. 85db and below hearing loss one group and above 85db hearing loss as another group at 500Hz level and 95db and below as one group and above 95db as another group at 1000Hz level and 2000Hz level for both the ears and their performance was observed. It was found out that 't' values computed for these two groups were not significant in any tests except in one test namely compound word segmentation, which means the students performance did not differ based on their degree of hearing loss. Even in the compound word segmentation test the 't' value was significant only at 0.05 level at 500Hz level for the left ear. In this case surprisingly students with higher degree of hearing loss in the left ear at 500Hz performed better than their counter parts who have lesser degree of hearing loss.

This result indicated that the performance of the hearing impaired children need not necessarily dependent on the degree of hearing loss especially with reference to reading comprehension skills and syntactic abilities of children.

Table 4.10 't' values computed for the performance of students in different tests based on the degree of hearing loss at different levels for both right and left ear

Name of the Test	Right ear			left ear		
	500	1000	2000	500	1000	2000
1. Rhyme generation	0.447	1.049	0.401	0.055	0.447	0.472
2. Rhyme Identification	0.609	0.483	0.866	0.208	0.609	0.997
3. Syllable segmentation.	0.277	0.069	0.331	1.207	0.277	1.203
4. Compound word segmentation	1.295	0.494	0.221	2.427	1.295	1.130
5. Compound word identification	0.727	0.554	0.209	0.360	0.727	0.564
6. Morpho syntactic lexical awareness	0.704	1.104	1.013	1.480	0.704	0.334
7. Sentence Acceptance	1.190	0.734	0.676	0.764	1.190	1.235
8. Sentence correction	0.178	0.178	0.013	0.228	0.178	0.576
9. Short term memory	0.874	0.874	1.033	0.409	0.874	0.305
10. Reading passage with objective type questions	0.140	0.552	0.704	0.892	0.140	1.018

11	Reading passage cloze I	1.031	1.312	1.246	0.802	1.031	0.721
12	Reading passage cloze II	0.315	0.121	0.124	0.142	0.315	0.485
13	Reading passage reproduction	1.830	1.205	1.428	0.788	1.830	1.485
14	Reading awareness Index	0.650	0.323	0.681	1.343	0.650	1.608
15	IQ	0.371	1.214	0.036	0.978	0.371	0.964
16	Identification of equivalent meaning	1.180	0.486	0.457	0.555	1.180	1.874
17	Achievement Scores	0.291	10.464	0.436	1.627	0.291	0.668

4.4 Correlational analysis : To find out the relationship among these tests correlation was computed for all the tests. Table 4.10 gives the 'r' values for various tests administered to the experimental group.

4.11 'r' values, and their significant levels for correlated variables

S.No	Variable	Correlated variable
1.	Rhyme generation	1. Short term memory 0.05
	4 variables	2. Index of reading awareness 0.01 - ve
		3. IQ - 0.01 - ve
		4. Explicit Inference (0.05)

2. Rhyme identification :
5 variables
 1. sentence correlation 0.05 - ve
 2. Short term memory 0.01 - ve
 3. Cloze Reading passage II 0.05 - ve
 4. Mothers' Occupation, 0.05
 5. Hearing loss at 2000 Hz in the left ear 0.05
3. Syllable segmentation:
4 variables
 1. Sentence correction 0.05 - ve
 2. Short term memory 0.01 - ve
 3. Cloze Reading passage II 0.05
 4. Family Income 0.01
4. Compound word segmentation:
2 variables
 1. Hearing loss at 500Hz 0.05 in the left ear
 2. Hearing loss at 1000 Hz 0.05 in the left ear
5. Compound word identification:
3 variable
 1. Reading passage for reproduction 0.05
 2. Mothers' Education 0.05
 3. Family History i.e occurrence of hearing loss in the family 0.01.
6. Morphosyntactic and lexical awareness:
8 variables
 1. Sentence acceptance 0.05
 2. Short term memory 0.01
 3. Reading passage with objective type questions 0.01
 4. Mothers education 0.05
 5. Fathers occupation 0.05
 6. School Achievement level 0.05
 7. Implicit inference 0.01
 8. Creative Questions 0.01
7. Sentence acceptance:
7 variables
 1. Reading comprehension passage with objective type questions 0.05
 2. Gender 0.05 - ve
 3. Fathers Education 0.05
 4. Mothers Education 0.05
 5. Fathers occupation 0.05
 6. Siblings status 0.01 - ve
 7. Literal questions 0.05

8. Sentence correction:
 1. Rhyme identification 0.05 - ve
 2. Syllable segmentation 0.05 - ve
 3. Family income 0.05 - ve
 4. Explicit Inference 0.05
9. Short term memory:
8 variables
 1. Rhyme generation 0.05 - ve
 2. Rhyme identification 0.01 - ve
 3. Syllable segmentation 0.01
 4. Morphosyntactic lexical awareness 0.01
 5. Cloze reading passage II 0.01 -ve
 6. Index of reading awareness 0.05 - ve
 7. Gender 0.01 - ve
 8. Creative questions 0.05
10. Reading passage with objective type questions:
14 variables
 1. Morphosyntactic lexical awareness 0.01
 2. Sentence acceptance 0.05
 3. Identification of equivalent meaning 0.01 - ve
 4. Age 0.01 - ve
 5. Fathers occupation 0.05
 6. Siblings status 0.05 - ve
 7. Caste 0.01 - ve
 8. Occurance of hearing loss in the family 0.01
 9. Achievement scores in the school 0.05
 10. literal comprehension 0.01
 11. Explicit Inference 0.01
 12. Implicit Inference 0.01
 13. Organization 0.01
 14. creative question 0.05
11. Identification of equivalent meaning :
7 variables
 1. Reading Comprehension Passage with objective type questions 0.01 - ve
 2. Reproduction passage 0.05 - ve
 3. Age 0.05
 4. Caste 0.05
 5. Hearing loss at 1000Hz in the left ear 0.05 - ve
 6. Literal comprehension 0.01 - ve
 7. Organization 0.01 - ve
12. Cloze Reading passage I :
5 variables
 1. I.Q 0.05
 2. Gender 0.01 - ve
 3. Hearing loss at 1000 Hz in the right ear 0.05 - ve
 4. Creative questions 0.05 - ve

- | | | |
|-----|--|---|
| 13 | Cloze Reading
passage II:
4 variable | 1. Rhyme identification 0.05
2. Syllable segmentation 0.05 - ve
3. Short term memory 0.01 - ve
4. Family income 0.01 - ve |
| 14. | Reproductive
passage:

9 variables | 1. Compound word identification
0.05

2. Identification of equivalent
meaning 0.05 - ve
3. Age 0.01 - ve
4. Mother's occupation 0.05
5. Family income 0.05 - ve
6. Achievement in the School 0.01
7. Age of admitting in the School
0.01 - ve
8. Hearing loss at 2000Hz in the
left ear 0.05
9. Explicit inference 0.05 - ve |
| 15. | Index of
reading aware-
ness:
4 variables | 1. Rhyme generation 0.01 - ve
2. Short term memory 0.05 - ve

3. IQ 0.01 - ve
4. Gender 0.05 |
| 16. | I.Q :
5 variables | 1. Rhyme generation 0.01
2. Cloze reading passage I 0.05
3. Index of reading awareness
0.01 - ve
4. Gender 0.05 - ve
5. Mothers Education 0.05 |
| 17. | Gender :
8 variables | 1. Sentence acceptance 0.01 - ve

2. Fathers Education 0.01 - ve
3. Cloze reading passage I 0.01 - ve
4. Index of reading awareness
0.05 - ve
5. I.Q 0.05 - ve
6. Age 0.01 - ve
7. Caste 0.01 - ve
8. Age of admitting in the school
0.01 - ve |
| 18. | Age :
13 variables | 1. Reading passage with questions
0.01 - ve
2. Identifying equivalent meaning
0.05
3. Passage for reproduction
0.01 - ve
4. Gender 0.05 - ve |

5. Fathers Education 0.01 - ve
 6. Mothers occupation 0.05 - ve
 7. Caste 0.01
 8. Achievement in the school 0.01 - ve
 9. Age of admitting in the school 0.01
 10. Hearing loss at 2000Hz in the left ear 0.05 - ve
 11. Literal comprehension 0.05 - ve
 12. Explicit Inference 0.01 - ve
 13. Implicit inference 0.05 - ve
19. Fathers' Education: 5 variables
1. Sentence Acceptance 0.05
 2. Mothers Education 0.01
 3. Fathers occupation 0.01
 4. siblings status 0.01 - ve
 5. Occurance of hearing loss in the family 0.05
20. Mothers' Education: 11 variables
1. Compound word segmentation 0.05
 2. Morphosyntactic lexical awareness 0.05
 3. Sentence acceptance 0.05
 4. I.Q 0.05
 5. Fathers Education 0.01
 6. Fathers' occupation 0.01
 7. Occurance of hearing loss in the family 0.01
 8. Achievement in the School 0.01
 9. Explicit Inference 0.05
 10. Critical reading questions 0.05
 11. Creative reading questions 0.05
21. Fathers' Occupation: 9 variables
1. Morpho syntactic lexical awareness 0.05
 2. Sentence acceptance 0.05
 3. Reading comprehension passage 0.05
 4. Cloze Reading passage 0.05 - ve
 5. Fathers' Education 0.01
 6. Mothers' Education 0.01
 7. Explicit Inference 0.05
 8. Creative reading questions 0.01

22. Mothers' Occupation:
5 variables
 1. Rhyme identification 0.05 - ve
 2. Reproductive reading passage 0.05
 3. Age 0.05 - ve
 4. Age of admission in the school 0.05 - ve
 5. Explicit Inference 0.01
23. Income:
5 variables
 1. Syllable segmentation 0.01
 2. Sentence correction 0.05 - ve
 3. Cloze reading passage II 0.01 - ve
 4. Reproductive reading passage 0.05 - ve
 5. Age of admitting in the school 0.05
24. Siblings status:
8 variables
 1. Sentence acceptance 0.01 - ve
 2. Reading comprehension passage 0.05 - ve
 3. Fathers' Education 0.01 - ve
 4. Family income 0.05 - ve
 5. Hearing loss at 500 Hz in the right ear 0.05 - ve
 6. Hearing loss at 1000 Hz in the right ear 0.05 - ve
 7. Hearing loss at 2000Hz in the right ear 0.05
 8. Hearing loss at 2000Hz in the left ear 0.05 - ve
25. Caste:
11 variables
 1. Reading comprehension passage with questions 0.01 - ve
 2. Identification of equivalent meaning 0.05
 3. Gender 0.01 - ve
 4. Age 0.01
 5. Age of admitting in the School 0.05
 6. Hearing loss at 1000Hz in the left ear 0.05 - ve
 7. Hearing loss at 2000 Hz in the left ear 0.05
 8. Literal comprehension 0.01 - ve
 9. Explicit Inference 0.01 - ve
 10. Implicit Inference 0.01 - ve
 11. Organization 0.01 - ve

26. Family History
(Occurance of
hearing loss):
9 variables
1. Morphosyntactic lexical awareness 0.01
 2. Reading comprehension passage 0.05
 3. Fathers Education 0.05
 4. Mothers Education 0.01
 5. Fathers occupation 0.05
 6. Explicit inference 0.05
 7. Implicit Inference 0.05
 8. Organization 0.05
 9. Creative questions 0.01
27. Achievement in
the School:
9 variables
1. Morphosyntactic lexical aware-
ness 0.05
 2. Reading comprehension passage
 3. Reproductive passage 0.01
 4. Age 0.01 - ve
 5. Fathers Education 0.01
 6. Admission age in the School
0.05 - ve
 7. Explicit Inference 0.01
 8. Implicit Inference 0.01
 9. Organization 0.01
28. Age of admission
in the School:
11 variable
1. Reproductive passage 0.01 - ve
 2. Gender 0.01 - ve
 3. Age 0.01
 4. Mothers' occupation 0.05 - ve
 5. Family Income 0.05
 6. Caste 0.05 negative
 7. Achievement in the school
0.05 - ve
 8. hearing loss at 500Hz in the
left ear 0.05 - ve
 9. Hearing loss at 1000Hz in the
left ear 0.05 half ear 0.05 - ve
 10. Hearing loss at 2000 Hz in the
left ear 0.01 - ve
 11. Explicit Inference 0.05 - ve
29. Hearing loss
at 500Hz in the
right ear:
6 variables
1. Siblings Intellectual status
0.01 - ve
 2. Hearing loss at 1000Hz in the
right ear 0.01
 3. Hearing loss at 2000Hz in the
right ear 0.01
 4. Hearing loss at 500Hz in the
left ear 0.01
 5. Hearing loss at 1000Hz in the
left ear 0.01
 6. Hearing loss at 2000Hz in the
left ear 0.01

30. Hearing loss at 1000Hz in the right ear:
7 variables
1. Identification of equivalent meaning 0.05 - ve
 2. Siblings Intellectual status 0.05 - ve
 3. Hearing loss at 500Hz in the right ear 0.01
 4. Hearing loss at 2000Hz in the right ear.
 5. Hearing loss at 500 Hz in the left ear 0.01
 6. Hearing loss at 1000Hz in the left 0.01
 7. Hearing loss at 2000Hz in the left ear 0.01
31. Hearing loss at 2000Hz in the right ear:
6 variables
1. Siblings Educational status 0.05 - ve
 2. Hearing loss at 500Hz in the right ear 0.01
 3. Hearing loss at 1000Hz in the left ear 0.01
 4. Hearing loss at 500Hz in the left ear 0.01
 5. Hearing loss at 1000Hz in the left ear 0.01
 6. Hearing loss at 2000Hz in the left ear 0.01
32. Hearing loss at 500Hz in the left ear:
6 variables
1. Age of admitting in the school 0.05 - ve
 2. Hearing loss at 500Hz in the right ear 0.01
 3. Hearing loss at 1000Hz in the right ear 0.01
 4. Hearing loss at 2000Hz in the right ear 0.01
 5. Hearing loss at 1000Hz in the left ear
 6. Hearing loss at 2000Hz in the left ear
33. Hearing loss at 1000Hz in the left ear:
9 variables
1. Compound word segmentation 0.05
 2. Identification of equivalent meaning 0.05 - ve
 3. Caste 0.05 - ve
 4. Age of admission 0.05 - ve
 5. Hearing loss at right ear 0.01.
 6. Hearing loss at right ear 0.01
 7. Hearing loss at right ear 0.01

8. Hearing loss at 500Hz in the left ear 0.01
 9. Hearing loss at 2000Hz in the left ear 0.01
34. Hearing loss at 2000Hz in the left;
11 variable
1. Rhyme identification 0.05
 2. Reading passage for reproduction 0.05
 3. Age 0.05 - ve
 4. Caste 0.05 negative
 5. Age of admission in the School 0.01 - ve
 6. Hearing loss at 500Hz in the right ear 0.01
 7. Hearing loss at 1000Hz in the right ear 0.01
 8. Hearing loss at 2000Hz in the right ear 0.01
 9. Hearing loss at 500Hz in the left ear 0.01
 10. Hearing loss at 1000Hz in the left ear 0.01
 11. Hearing loss at 2000Hz in the left ear 0.01
35. Literal comprehension;
8 variables
1. Sentence acceptance 0.05
 2. Reading comprehension passage with question 0.01
 3. Identification of equivalent meaning 0.01 - ve
 4. Age 0.05 - ve
 5. Siblings Intellectual status 0.05 - ve
 6. Caste 0.01
 7. Explicit Inference 0.01
 8. Implicit Inference 0.01
36. Explicit Inference;
12 variables
1. Rhyme generation 0.05
 2. Sentence correction 0.05
 3. Reading comprehension passage with objective questions 0.01
 4. Reading passage for reproduction.
 5. Age 0.05 - ve
 6. Mothers Education 0.05
 7. Caste 0.05 - ve
 8. Occurance of hearing loss in the family 0.05
 9. Achievement in the School
 10. Hearing loss at 500 Hz in right ear 0.05 - ve
 11. Implicit Inference 0.01
 12. Organization 0.01

37. Implicit Inference: 1. Morpho syntactic lexical awareness 0.01
8 variables 2. reading comprehension passage with objective questions 0.01
3. Caste
4. Occurance of hearing loss in the family 0.05
5. Achievement in the School 0.01
6. Literal comprehension 0.01
7. Explicit Inference 0.01
8. Organization 0.01
38. Organization: 1. Reading Comprehension passage with objective type questions 0.01
9 variables 2. Identification of equivalent meaning 0.05 - ve
3. Mothers Education 0.05
4. Caste 0.01 - ve
5. Occurance of hearing loss in the family 0.01
6. Achievement level in the School 0.01
7. Literal comprehension 0.05
8. Explicit Inference 0.01
9. Implicit Inference 0.01
39. Creative reading: 1. Morpho syntactic lexical awareness 0.01
7 variables 2. Short term memory 0.05
3. Reading comprehension passage with objective type questions 0.05
4. Cloze reading passage I 0.05 - ve
5. Mothers Education 0.05
6. Fathers Occupation 0.01
7. Caste 0.01
40. Reading comprehension passage (total) : 1. Morphosyntactic lexical awareness 0.01
14 variables 2. Sentence Acceptance 0.05
3. Identification of equivalent meaning 0.05 - ve
4. Age 0.01 - ve
5. Fathers occupation 0.05
6. Siblings mental status 0.05 - ve
7. Caste 0.01 - ve

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reading passage which means reading comprehension need not depend on the degree of hearing loss of the students. Short term memory has correlated positively only with three variables namely syllable segmentation (0.01), morphosyntactic lexical awareness (0.01) and creative questions (0.05). But negatively correlated with 5 variables namely Rhyme identification 0.01, Rhyme generation (0.05), Cloze reading passage II Index of reading awareness (0.05) and Gender (0.01) which implies that the students short term memory is not adequately trained which might be the reason for not developing good reading skills in hearing impaired children.

When the performance of hearing impaired students in the two cloze reading passages was observed., it was found that two reading passages correlated with different variables. The first cloze reading passage correlated positively with IQ (0.05) and the second cloze reading passage correlated positively with Rhyme Identification (0.05). All other variables namely Gender, hearing loss at 1000Hz in the right ear and creative questions in the case of first reading passage and syllable segmentation short term memory, and family income in the case of second reading passage were negatively correlated. This means the cloze reading passages did not show any relationship with reading comprehension passage. This result in turn means syntactical abilities of the children did not necessarily reflect in reading comprehension skills as cloze passages

demand more of language and vocabulary proficiency than mere understanding of the passage for meaning and ideas.

4.5 Factorial Analysis : The forty variables considered for the study were analysed for high factor loading components. Eleven factors were extracted from this factor analysis.

The first factor has significant loading with reading comprehension test with objective questions, literal level comprehension, explicit inference, Implicit inference, organization, of the reading skill, and other variables namely achievement in the school, mothers' education, fathers' occupation and occurrence of hearing loss in the family. This result indicated that reading skill is associated with achievement in the school and family educational status. Significant negative loadings with age at age of admission in the school and siblings mental status implies that these were influencing factors in a negative way for reading skill development.

The second factor has high loadings with morphosyntactic lexical awareness, short term memory which means the abilities exhibited in these two types of tests might be different from abilities required for reading skill. Significant negative high loadings with all levels of hearing loss (i.e 500Hz, 1000Hz, 2000Hz) in both the indicated that the performance of students in the

tests might have affected by the degree of hearing loss of students. The correlation of the reading passage with questions, with this factor is just 0.24542.

The third factor had high loadings with syllable segmentation, achievement in the school, reading passage for reproduction and other variables namely age, income, mothers' occupation, age of admission in the school, and has negative loadings with cloze reading passage II. This means age and economic status of the family might have influenced the reading ability of the children.

The correlation of this factor with the reading passage with different levels of comprehension was very low, i.e. 0.17620. This means reading skill need not necessary depend on age of admission or economic status of the family.

The fourth factor was found to be high factor loadings with, Rhyme generation, compound word segmentation, I.Q fathers occupation and mothers education". Relationship of this factor with reading comprehension test with questions was also very low (0.12647). This means the abilities necessary for rhyme generation and compound word segmentation, were not directly related to reading skill .

The fifth factor showed positive relationship with sentence correction, short term memory, I.Q and fathers education and fathers' occupation and negative relationship with syllable segmentation, Index of reading awareness and

gender. Even the reading comprehension passage with objective questions also showed negative relationship but very negligible. This means fathers educational and occupational status might have a role to play in developing students abilities for sentence correction which in turn is related to I.Q and short term memory. The potentials required for syllable segmentation, reading awareness might be different and might be based on gender.

The negligible negative correlation of the reading passage with this factor indicates that reading skill might not be influenced by this factor.

The sixth factor was related to cloze reading passage I, morphosyntactic lexical awareness, fathers' occupation, and negatively related to gender. The relationship of reading comprehension passage was very low (0.24617) for a sample of 20. This factor indicated the abilities required for cloze reading passage I, morphosyntactical lexical awareness were quite different from the abilities required for reading skill.

Factor seven was associated with rhyme identification, cloze reading passage II and sentence correction but negatively related to syllable segmentation, mothers occupation and Income. This factor was negatively associated with reading comprehension passage in a negligible degree (0.01103) which means the abilities necessary for reading skill were different from the

abilities required for rhyme identifications and cloze reading passage II and sentence correction as these tests were more grammatically oriented.

The eighth factor has shown high factor loading with short term memory and mothers' occupation and negative relationship with rhyme identification. The relationship of this factor with reading comprehension passage was only 0.04364 which is negligible. This means short term memory was not directly associated with reading skill in this sample.

The ninth factor was positively associated with sentence acceptance, cloze reading passage I, and negatively associated with gender, compound word segmentation, and identification of equivalent meaning. This passage has very low relationship with reading comprehension passage (0.03984). This means the skills required for sentence acceptance and cloze reading passage I were different from skills required for compound word segmentation and identification of equivalent meaning and these four tests were not directly related to reading comprehension test.

The tenth factor indicated association with compound word identification, cloze reading passage II. This factor has also very low correlation with reading comprehension passage (0.04849). This means the skills required for these tests were not directly contributing to the development of reading skill.

The eleventh factor was associated with creative reading and compound word segmentation and negatively associated with achievement in the school. Its relationship with reading comprehension passage was also negligible (0.07600). This means creative reading, compound word segmentation skills were different from the skills required for achievement in the school. The abilities required for these tests were not directly contributing to reading skill.

Each of these factors explain the following percentage of variance.

Factor 1 : 22.7 %

Factor 2 : 15.8

Factor 3 : 11.4

Factor 4 : 9.4

Factor 5 : 7.1

Factor 6 : 6.8

Factor 7 : 5.3

Factor 8 : 4.8

Factor 9 : 4.3

Factor 10 : 3.6

Factor 11 : 3.2

4.6 Discussion of the Results:

The results of this study indicated that the reading comprehension level of the hearing impaired student at IX class level in Andhra Pradesh ranged from 22.4% to 38.25% which means the students need to be trained to improve their reading skills. Comprehension of students performance based

on the region indicated that the performance of the hearing impaired students in the Telangana region was better than the performance of students from Coastal Andhra (Telangana M: 35.87 Coastal Andhra M:31.57). The performance of coastal Andhra students was better than Rayalaseema region students (Rayalaseema 125.67% and Coastal Andhra 31.57) variance was also highest in Telangana region ; next comes Coastal Andhra region and the last in the order comes students from Rayalseema region. This means the students reading levels were lowest in Rayalaseema region and the variation in their standards was also less when compared to other two regions.

Comparison of students performance in different reading levels and in different regions indicated that at literal level, the performance of Coastal Andhra and Telangana region did not differ where as in comparison with Rayalaseema region, the performance of the students in both the regions was better than Rayalaseema region students. With reference to Explicit and Implicit inference and creative reading the performance levels of Andhra and Rayalaseema regions did not differ where as in comparison with Telangana region, the students from Telangana region fared better than either Coastal Andhra or Rayalaseema region. In the case of organization skill, the students' performance differed significantly from each region, the highest performance was observed in Telangana region students, followed by Coastal Andhra students and lastly Rayalaseema students. No difference in the performance

levels of students were observed in three regions in critical reading ability. .

The experimental results indicated that the conceptualized strategy improved the reading skills of the experimental group in all the four school subjects selected namely Telugu language, Mathematics, Science and Social studies. Comparatively the students performance was better in Telugu language, followed by Social studies, Science and Mathamatics respectively. Comparison of students performance in various tasks in relation to the degree of hearing loss in the right and left ear indicated that their performance levels were not related to their degree of hearing loss.

Correlational analysis indicated that reading comprehension appears to be significantly positively related to task like morphosyntactic lexical awareness, sentence acceptance, achievement scores in the school, different levels of comprehension namely literal, explicit and implicit inference, organization skill and creative reading skill. Also related to variables like fathers occupation, and occurence of hearing loss in the family. Certain variables such as age, siblings mental status, caste appears to be negatively correlated which means the influence of these factors were not favourable to the development of reading skill. Similarly the task of identifying equivalent meaning correlated significantly negatively with reading comprehension passage which means the ability for value judgement required in performing this task is different from the ability required for reading comprehension passage.

The factor analysis identified eleven factors with high factor loadings out of which the first factor has significant loading with reading comprehension test and other variables such as achievement in the school, mothers' education, fathers' occupation, occurrence of hearing loss in the family and negative loadings with caste, age and age of admission in the school. This means reading skill is associated with achievement in the school and also family background. The personal factors such as age, caste and age of admission in the school might be playing negative role in developing their reading skill which the teacher need to take care of.

4.7 Conclusion : The analysis of the collected data reveals that the students were not used to reading situations, but once they were given opportunities to read using any of the school subjects specified for them, they will be able to develop and improve their reading abilities. The teacher can provide opportunities to read through guided and focussed questions and encourage reading with good interpersonal relationship and proper guidance in the classroom situations. For such an approach to teaching, directed questioning strategy at different levels of reading was used and validated. Teachers may well adapt or adopt this strategy for developing reading abilities in hearing impaired students.

SUMMARY AND FINDINGS

5.0 Introduction:

Integrated Education for Disabled children (IEDC) aims to provide a vast number of disabled children in the country. This step has lead to emphasize literacy skills to the disabled. These literacy skills are much more important to hearing impaired children, when compared to other disabled children, as their natural way of acquisition of language is affected due to hearing loss. Among the literacy skills reading occupies prime place in the academic environment of the disabled child in general and hearing impaired in particular.

Reading is a complex process involving perceptual, conceptual, analytical, synthetic critical and even creative abilities. Reading integrates and improves the nature and quality of oral and written language. In todays' World, reading is an essential aid to personal development and social progress. For intellectual equipment, for personal growth, for the development of advanced knowledge for the pursuit of excellence, for the scientific, social, economic and even political growth and welfare of a country, reading directly or indirectly serves as a means. Therefore young people need to read widely and hearing impaired children are no exceptions Reading implies reading with an attitude

of questioning, integrating, evaluating and applying the information read which in turn means reading independently with a mature mind. Reading is basic to appreciation of life, nature and literature.

5.1 Objectives of the study :

Reading skill is not systematically developed through instructional programmes in schools in India in general and in Andhra Pradesh in particular. Reading helps develop thinking which is essential for matured understanding and constructive attitude to life. It is imperative that reading ability be developed in the adolescent students at IXth class level, if not earlier, though it may be possible to do so at an earlier stage too. In view of the IEDC programme, hearing impaired students at IXth class level should also be taken care of in this direction.

The present study aims at designing a strategy for developing reading abilities in IXclass hearing impaired students studying IX class, in four school subjects in Telugu, Mathematics, Biological Science, and Social Studies.

The main objectives of the study were:

1. To identify the reading levels of hearing impaired students in class IX.
2. To identify the gaps in the reading levels of hearing impaired students in class IX

3. To develop strategies to improve the reading levels of hearing impaired students in class IX using four school subjects.
4. To try out these strategies for their effectiveness.

5.2 Design of the study : A survey come experimental design was selected for this study. The survey aims at finding out the level of reading skill of the hearing impaired students and the experimental design aims at developing a strategy to improve reading skill and to find its effectiveness in developing the critical reading skill. The experimental design selected was control and experimental group method with pre test treatment and post test model in which for pre and post tests reading comprehension tests were given in the beginning and at the end of the experiment. Treatment in this study was the application of the conceptualized and developed strategy in the classroom situation.

Tools : Twelve variables were considered for their effect on the development of reading skill in hearing impaired students. They are Intelligence, family status, family history Economic status hearing loss, age of admission in the school, age, reading awareness, syntactic and sementic proficiency, and language awareness, achievement in the school and short term memory.

Cattle's non-verbal Intelligence test for the age group of sixteen plus was administered. Family status was

measured from parents educational and occupational status and siblings mental status. (normal\abnormal). Family history was measured in terms of occurrence of hearing loss in the family apart from the student in the target group; Economic status was measured from the family annual income, Hearing loss at three levels namely 500Hz, 1000Hz, 2000Hz for right and left ear was taken for all the students from the audiologist. Age of admission of the student in the school was also taken as delayed admission may restrict students language development significantly in hearing impaired students. Reading awareness was measured through a test developed on the basis of metacognitive reading awareness scale developed by McLain, Grindley and McIntosh (1991), syntactic and semantic proficiency was measured using two cloze passages, language awareness was measured using various language related tasks such as rhyme generation, rhyme identification, syllable segmentation, compound word segmentation, compound word identification sentence correction and sentence acceptance as hearing impaired were mainly deficient in language development, it was important and also essential to know the extent of language they already know and whether they were capable of using their awareness in language in developing their comprehension in reading. Mean achievement scores of the student was taken from the half yearly and quarterly examination results from the school. As short term memory was essential to understand and

interpret meaning of the read passage, a short term memory test was also developed to find out its relationship with reading comprehension ability.

Apart from these tools, one diagnostic reading test was constructed for exploratory survey in the phase I and instructional modules with reading test in four school subjects namely Telugu, Mathematics, Biological Science and Social Studies were developed for experimental group as pretest and post test in the second phase of the study.

5.3 Sample : For survey of the reading test, stratified purposive sample at the school level and cluster sample at the students level were selected. The experimental group was selected on the basis of the mean achievement of the schools in the diagnostic comprehension test given for survey. The group with the lowest mean achievement in the reading comprehension test was selected for experiment. The survey was conducted in nine schools in different regions in Andhra Pradesh for a sample of 142 students.

5.4 Procedure : Reading was defined in this study as an ability to read, interpret, infer, organize, evaluate and create. After the review of related literature different levels of reading skill were identified.

Reading skill was analysed under three levels - (1) Reading the lines (2) Reading between the lines (3) Reading beyond the lines. The details of the analysis were as

follows. At the first level i.e reading the lines, three subskills were identified. They are - identifying skill relating skill and organizing skill. At the second level i.e reading between the lines, two sub skills were identified. They are explicit inference and Implicit inference. At the third level i.e reading beyond the lines, two subskills were identified. They are critical reading and creative reading skills.

following were the different strategies identified under each subskill.

Level	Skill	Strategy
1. Reading the lines	1. Identifying	1. Main idea 2. Details 3. Purpose
	2. Relating skill	1. Relating main idea to details 2. Relating main idea to purpose
	3. Organization skill	1. Summarizing 2. Arranging in the textual order.
2. Reading between the lines	1. Explicit Inference	1. Inferring from explicite main ideas
		2. Inferring from explicit details
		3. Inferring exact points
		4. Inferring purpose from explicit main ideas and details.

	2. Implicit Inference	1. Inferring implied meaning
		2. Inferring implied purpose
		3. Inferring assumptions
		4. Inferring facts and opinions
		5. Inferring character traits
		6. Inferring emotions
		7. Inferring implications
3. Reading beyond the lines	Critical reading	Judging the content in terms of
		1. Validity
	Creative reading	2. purpose
		3. Relevance
		4. Practicality
		5. Authenticity
		1. Applying in new situations
		2. Reorganize ideas in a novel ways

After the identification of the different levels of the reading skill, an exploratory survey, and a pilot study was conducted. The reading comprehension test was constructed covering different levels and subskills of reading and administered to 142 students in hearing impaired schools having IX class in different regions in Andhra Pradesh. The mean achievement of the students in reading comprehension was calculated school wise, region wise and subskill wise. The students of the school with the lowest mean achievement was selected for experimental purpose.

5.4.1 Experimental Design : For the experiment the class was divided into two equal halves on the basis of their school achievement. One group was considered as control group. This control group was given pre and post tests in four school subjects for a unit to be taught in the class. The unit selected in each subject was taught in the normal way in the regular class. The experimental group was also given same pre and post tests for the units to be taught. But in the experimental group the units to be taught were developed into instructional modules incorporating focussed questions for developing reading and these modules were given to the students after pre test and were asked to read the text and answer the questions given below with the help of the text, with necessary and appropriate interventions by the teacher wherever required and then the lesson was completely explained at the end. After this treatment post test was given. The difference in the achievement of the control and experimental group was compared in both pre and post tests for measuring the improvement score in the reading ability. This experimental group was subjected to sixteen other tests for measuring their language awareness, syntactic, semantic proficiency, short term memory, reading awareness, intelligence. Apart from this, data was gathered from the records for age, parents education and occupational status, income, siblings mental status, caste, occurrence of other cases of hearing impairment in the family, age of

admission in the school, degree of hearing loss at 500Hz, 1000Hz, and 2000Hz achievement in the school.

The students in the experimental group were taught one unit from four school subjects namely Telugu, Mathematics Biological science and social studies for a period of one month (teaching was done one subject after another subject). With 1½ hour teaching through questioning, and an half an hour classroom group or individual exercises daily, totally 30 instructional hours, 15hrs, for teaching and 15hrs for exercises spent over a period of one month. After completion of the unit, the students were given same reading comprehension test given for pretesting, improvement in the reading ability was derived from the difference in the achievement of the students in pre and post reading tests in the four subjects. The same teacher taught the control group. Teaching of the control group was done first, then the experimental group in the successive periods to avoid lapse of time.

5.4.2 Strategy:

The different skills were identified for each level. The skill was converted into tasks or activities to be performed in the classroom situation. A small paragraph from the unit selected was taken at a time and the students were assigned the task of identifying main ideas, details, relationships, infer ideas, organize sequence through questions. Guidance was given whenever any student approach

or whenever the teacher finds that there was problem for the individual. In short questioning was used as a stimulating tool to initiate students thinking, for identifying, relating and organizing. Questions for critical and creative reading were not used as the students were not able to take the load after serious thinking for literal and inferential comprehension as they were not used to this type of intensive reading sessions.

5.5. Analysis:

The data collected were analysed in various ways. The reading comprehension test administered to a sample of 142 hearing impaired IXclass students was analysed for reading achievement level and for the difficulty level of the reading ability of the students.

The reading achievement of the students was calculated schoolwise, regionwise and question wise. The mean difference in the reading achievement of the students was tested for significance regionwise and subskillwise to find out whether there was any real difference in their achievement levels. If so, in what aspect of the reading skill. The range of difficulty level of the students in different subskills of reading comprehension, and the difficulty level of the the students for the total reading skill was calculated region wise and school wise. The mean difficulty level of the students was tested for its significance on the basis of region and subskill to find out

whether there was any real difference in their difficulty level of the students.

To find out the improvement of reading ability in the experimental and control group, 't' values were computed in four subjects for pre test and post test reading comprehension tests administered to control and experimental group.

An inter correlation matrix computed for various language awareness tasks, reading awareness index,, I.Q cloze tests, reading comprehension tests, parents educational and occupational status, hearing loss at different levels, occurrence of hearing loss in the family, age, age of admission in the school, gender achievement in the school to findout how these variables were related to each other and to reading comprehension ability. Means and standard deviations were calculated for all the variables. The values of these variables were analysed for extracting factors using factor analysis technique. In the eleven factors extracted, only in the first factor, reading skill was found to be with high factor loading.

5.6 Summary of the Findings :

Following was the summary of the findings of the above analysis.

1. The students in the experimental group were able to improve the reading ability through the strategy implemented and this proves the effectiveness of the strategy ('t values were significant for the pre test and post test in the four

school subjects namely Telugu, Mathematics, Biological science and social studies.

2. The students in the control group did not show improvement in the reading ability and this also proves that ordinary routine teaching need not necessarily develop reading skills in children ('t' values were not significant for the pre test and post tests in the four school subjects for this group.

3. The entry level of both control and experimental group was found to be same as the 't' values for pretests of control and experimental group was not significant.

4. The total improvement of the reading skill in Telugu was 13.71%, in Maths 35.9%, in biological science it was 29.19% and in Social studies it was 34.86% which were significant at 0.01 level.

5. The intercorrelation matrix revealed that there was relationship with achievement scores and reading ability.

6. The inter correlation matrix also revealed that reading ability was not related to degree of hearing loss.

7. correlation matrix also showed that reading ability was related to morphosyntacticlexical awareness, sentence acceptance tasks, occupation, occurrence of hearing loss in the family, and all the sub skills of reading namely literal comprehension, explicit influence, implicit inference, organization and creative reading, and also achievement in

the school; caste, age, siblings mental status might have negative influence in the reading ability of the students.

8. Out of the eleven factors identified in the factor analysis, only the first factor has highly related to reading ability of the students of IX class.

9. Hearing impaired students reading ability was below 39%

10. There was difference in the reading abilities of hearing impaired students in different regions, students from Telangana region were better than coastal students, coastal students were better than students from Rayalaseema region.

11. In all regions students performance was best in literal level comprehension and lowest in critical reading ability.

12. Students differed in their reading ability in different regions at literal level, implicit inference, organization, and creative reading. In all these subskills the students from Telangana fared better than the other two region students. Next better was students from Andhra region.

13. Students performance did not differ significantly in various tasks related to language awareness and reading comprehension even though their degree of hearing loss was different, which means hearing loss was not a basic factor influencing students performance.

14. Students' achievement scores also did not differ significantly even though the degree of hearing loss was different which also means, hearing loss need not necessarily influence the achievement of the studnets in the school.

Implications

Reading skill is an important skill and is often overlooked in the educational institutions with the assumption that the reading will be developed automatically as the student mature in age and gain experience. This skill is much more neglected in the educational institutions of the hearing impaired students with the assumption that, the students lack adequate language to pursue the task.

But it is a wrong notion. The important aspect of reading is experience and opportunity to read, question and inquire. Unless these pre-requisites are met with, it is very difficult to develop thinking and in turn reading. Teachers are invariably in a better position to provide these facilities to the students in a class room situation for the development of reading ability which ultimately develops students into mature independent readers. With proper understanding and perspective and positive attitude to life and problems of life.

The inference that can be drawn from this study is that reading can be developed in a normal class room situation, with the books prescribed for the course without any disturbance to the curriculum activities in the academic course.

This study reveals that the important reading skills such as identifying, organizing relating inferring, judging

and applying can be developed through questioning and directing in a classroom situation, in teaching a lesson from a prescribed text. Infact these skills has to be practised in all lessons taught in a classroom, for developing reading skill.

In reading students learn by themselves, the teacher acts as a guide, posing appropriate questions at the right moment to direct the students' attention towards missed points, misunderstood or partially understood ideas, then deepening their understanding and helping them to integrate, infer, evaluate and finally think of the possibilities for use and application of the obtained information. The strategy suggested in this study has the following sequence of skills to be practised in a class room situation identifying, relating, organizing, inferring, judging and applying. In teaching reading, the teacher does not teach in the conventional sense, but stimulates students thinking through probing questions or prompting questions. In a way reading is self-learning process of "reading to learn" Since this is a self learning process, all students may not be at the same rate of learning. To encourage the participation of the slow or shy learners, especially hearing impaired learner, the class can be divided into groups or pairs based on students' knowledge, intelligence, personality, peer group relationship so that no person dominates in the class. The teacher should also see that no individual in the group dominates the other and deprive other's of their beneficial

opportunities. In this context it is essential for the teacher to develop good inter personal relationship with students. Once the students become aware of the ways of thinking, methods of application, they can adopt these tactics in other subject fields also for the better understanding of the subject field. Infact, if all subject teachers try to focus on reading in their subjects, students automatically develop reading skill and develop self learning process which is very much essential for hearing impaired students.

Suggestions :

In India, although research studies are being undertaken in reading, they are very meagre, and most of these studies just concentrate on reading comprehension for normal children. Therefore it is necessary to carry out studies in the teaching of reading to hearing impaired students.

Following are some of the suggestions which the investigator would like to make for further study.

1. Reading studies may be undertaken to all kinds of disabled children including mental retardation.
2. Reading studies are very much needed at different levels of education such as primary, middle school, high school, for hearing impaired students.
3. Reading studies are also very much desirable in different subject fields for understanding the sub

4. Different methods of teaching reading to different category of disabled is need of the day.
5. Different methods of teaching reading in different subjects can also be undertaken
6. Strategies for developing reading skill at different levels of hearing impaired may be useful contribution to the society.

Name:

Class:

Date:

Task 1 - Rhyme Generation

సావనలు : చూడు ఇక్కడ రెండు పదాలు ఉన్నాయి. తడి - దడి ఈ రెండు పదాలకు ఉచ్ఛారణలో వాచిక వుంది. మొదటి పదం 'త' అనే అక్షరంలోను రెండవ పదం 'ద' అనే అక్షరంలో ఆ అనే అచ్చు ఉంది. అలాగే నది - గది, కొంగ-దొంగ అనే పదాలకు కూడా ఉచ్ఛారణలో వాచిక ఉంది. మొదటి జంట న - గ లో ఆ అనే అచ్చు రెండవ జంట కొ - దొ లో 'ఓ' అచ్చు వుంది. క్రింద కొన్ని పదాలు ఇవ్వము. ప్రతిపదం ఏదురుగా ఉచ్ఛారణలో వాచిక ఉన్న ఇంకో పదం రాయాలి.

ఉదా: 1. పక్క - శీనక్క

2. క్రింద - వంద

1. రెక్క -

2. తేలు -

3. కుక్క -

4. కారం

5. మొక్క

6. తపన

7. పంట -

8. నెమ్మ -

9. కన్ను -

10. బుట్ట -

11. బిచ్చ -

12. గంట

13. వాణ్ని -

14. వాడగు -

15. వేరు -

16. పాలు -

17. తల -

18. జొన్న -

19. శుంచి -

20. మాట -

Name :

Class :

Date :

Task : 2 Rhyme Identification

క్రింద ఇచ్చిన పదజంటలను పదవండి

ఎ

బి

రడి - దడి

దారం - దూరం

నది - గది

నది - నాది

కొంగ - దొంగ

మెక్క - మొక్క

స్వరం - జ్వరం

వరం - వారం

రాశ - పాశ

ఆంగ్లం - అంగం

పైన ఇచ్చిన పదాల జంటలో ఎ గ్రూపులో ఉన్న పదాల మధ్య ఉచ్ఛారణలో పోలిక వుంది. 'త్రి' గ్రూపులో ఉన్న పదాల మధ్య రాతలో పోలిక ఉంది. ఉదా: పడి - దడి తీసుకుంటే వై - దై అక్షరాలలో ఒకే రకమైన ఉచ్ఛారణతో పలుకుతాము. కానీ దారం - దూరం అనే పదాలలో దా - దూ అక్షరాలు రావేట్టుడు ఒకేరకంగా రాసినా, పలకడం వేరుగా వుంటుంది. దా పలికేట్టుడు 'త్రి' అయి దూ పలికేట్టుడు ఉ అయి పలుకుతాము. క్రింద కొన్ని పదజంటలు ఇవ్వారు. ఉచ్ఛారణలో పోలిక ఉన్న పదాల జంటల్ని మాత్రం సున్నా చూపి గుర్తించండి.

ఉదా: 1. మొల - మొక్క

2. తమ్ము - దమ్ము

3. దాచోం - దోహం

పై మూడు జంట పదాలలో తమ్ము - దమ్ము మాత్రమే ఉచ్ఛారణలో పోలిక వుంది.

కనుక ఆ రెండింటికి కలిపి ఒక సున్నా చూపాము. వై పీఠంగా క్రింది పదాలను గుర్తించండి.

1. కారం - కారు

11. వళ్ళు - కళ్ళు

2. మొక్క - మొక్క

12. మూడు - మోడు

3. చెయ్యి - నెయ్యి

13. బొమ్మ - కొమ్మ

4. సబ్బు - డబ్బు

14. బేట - బోట

5. దాచ - డేచ

15. పది - గది

6. గుడి - కుడి

16. గంట - పంట

7. నల్లి - బల్లి

17. కప్పి - కాప్పు

8. దారం - ద్వారం

18. రోలు - రైలు

9. కమ్మం - కామ్మం

19. కాలు - చాలు

10. పన్ను - కన్ను

20. కళ్ళు - కోళ్ళు

Name

Class

Date

Task 1 జాబ్-అసైన్మెంట్

'శనగలు' అనే పదంలో మొదటి అక్షరం 'శ' క్షేప్తే 'నగలు' అనే మాట వస్తుంది. అలాగే క్రింద ఇచ్చిన ప్రతి పదం నుంచి ఒక అక్షరం తీసివేసి కొత్తపదం రాయండి.

1. మోకాలు
2. పాత్రలు
3. జీవితం
4. భోజనం
5. నగరం
6. గుమ్మడి
7. చిక్కున
8. పేపరు
9. సోగడ్డ
10. వాసన
11. పందిరి
12. మూకుప
13. జల్లేడ
14. బాతులు
15. దాసిమ్మ
16. తరంగం
17. ప్రదేశం
18. వడియం
19. ఆశయం
20. అసహనం

Name:

Class:

Date:

Task 4 Compound word Segmentation

కొన్ని జంటపదాలి రెండు పదాలుగా విడదీయవచ్చు ఉదాహరణకు చింతాకు చింత - అకు.
పదహారు పది - అరు చింతాకు అనేపదంలో మూడు అక్షరాలు పదహారు అనే పదంలో
నాలుగక్షరాలు ఉన్నాయి. మీరు రెండు పనులు చేయాలి. కింద ఇచ్చిన జంట పదాలలో ఎన్ని
అక్షరాలు ఉన్నాయో మొదట వాయాలి || 2 || రెండోది ఆ పదాన్ని రెండు పదాలుగా విడగొట్టాలి
ఉదా: వక్కపొడి = 4 వక్క - పొడి

పదము

అక్షరాల సంఖ్య

పదవిభజన

ఉదా: వక్కపొడి

4

వక్క - పొడి

1. పళ్ళపొడి

2. గుర్రబుండి

3. కొబ్బరాకు

4. బొమ్మరిల్లు

5. నూటపడి

6. మొలతాడు

7. లేనేటిగ

8. తాళమ్మ

9. వెరుగన్నం

10. దేనేత

11. వెన్నెముక

12. దేవులప్పుట్టు

13. కారప్పొడి

14. వెంకుపిల్లు

15. పూవూల

16. భూకము

17. నీటిబొట్టి

18. ముందుడబా

19. కర్తివేట

20. జడకుమ్మలు

Task 5 Compound word identification

సూచనలు: వాక్యంలో పదవిభజన అర్థం బట్టి మార్చుతుంది. ఉదా: ఈ రెండు వాక్యాలు చదవండి

1. మీరియులు పోడికి వెయ్యి

2. మీరియులపోడి కి వెయ్యి

మొదటి వాక్యంలో పదాలను మీరియులు - పోడి - వెయ్యి గా విభజించాలి. అదే రెండో వాక్యంలో ఇంకా మీరియులపోడి ఒకే పదంగా వాడాలి. అంటే రెండో వాక్యం "మీరియులపోడి, వెయ్యి" రెండో పదాలు వున్నాయి. మీరియుల పోడికి వెయ్యి అని విభజిస్తే ఆ వాక్యానికి అర్థం రాదు. అందుకని వాక్యం విభజించేటప్పుడు వాక్యంలోని అర్థాన్ని బట్టి పదాలను విడదీయాలి. క్రింద ఇచ్చిన వాక్యాలను అర్థమయ్యేట్లుగా పదవిభజన చేసి ఆ వాక్యానికి ఎరురగా వ్రాయండి

ఉదా: పూలుమూల వాడిపోయింది - పూలుమూల వాడి పోయింది

1. వెరుగుకన్నం లోకం
2. దారంబంటిలా పుట్టివెట్టు
3. గుర్రం బండికొనకూ
4. పాముపుట్టలోకి వెళ్ళింది
5. వెరుగన్నం రుచిగావుంది
6. పాముపుట్టలో వెయ్యివెట్టుకు
7. దారంబంటిలేసివెట్టు
8. వాళ్ళగుర్రం బండివేకారు
9. పాపకూసూదిమందు ఇచ్చిందారు
10. అల్లపవడినాకూలూ ఇష్టం
11. నాన్న గారిమందులుడబ్బాలోవేట్టారు
12. వేముపుట్టలోవున్నాయి
13. నేళ్ళతోబ్బికిడిగిందు
14. పూలుమూల కట్టు
15. వెన్న ముద్దకరిపోయింది
16. నేళ్ళతోబ్బిలోనింపు
17. అల్లంపవడికోసంకొన్నాను
18. బావికినల్లమొలతాడవట్టారు
19. వేముపుట్టలోనేలవెట్టుకు
20. పాపకిబోడిగుండువేయిందారు
21. నాన్న గారిమందులుడబ్బాలోవేట్టాను
22. డబ్బాలోనేగపిండివుంది
23. పూలుమూలకందంగావుంది
24. బావికినల్లమొలతాడవట్టారు

Task 6 Morphosyntax and lexical awareness

సూచనలు: క్రింద ఇచ్చిన వాక్యాలలో కొన్ని భాగలు ఉన్నాయి. ప్రతి వాక్యానికి ఎదురుగా రెండు పదాలు ఇవ్వారు. ప్రతివాక్యానికి ఎదురుగా ఇచ్చిన రెండు పదాలలో ఒక పదం ఆ వాక్యంలోని భాగంలో సరిపోతుంది. ఒకొక్కసారి ఆ పదం మాత్రం ర్వాస్తే సరిపోతుంది. కొన్నిసార్లు ఆ పదానికి ముందుగానీ, వెనుకగానీ ఒక అక్షరం చేర్చాల్సి వుంటుంది. మరికొన్నిసార్లు ఆ పదం మరీ రాయాల్సివుంటుంది. జాగ్రత్తగా చదివి అంటించి తగినపదంలో అర్థం సరిపోయేలా భాగలను నింపండి.

ఉదా: ఈ క్రింద నాలుగు వాక్యాలు ఇవ్వారు.

1. పుట్టిల్లో పాము వుంది | పుట్ట, పిట్ట
2. చొక్కాడి గుండెలు లేవు | గుండె, గుండు
3. ముదంలో బాట నల్లులు ఉన్నాయి | నల్లి, నల్ల
4. అసి బీర్ల కారులు | బీర, బూర

పై వాక్యాలలో మొదటి వాక్యం పూర్తి చేయాలంటే పుట్టిల్లో అసి రాయాలి. రెండవవాక్యంలో గుండె అనే పదాన్ని ' ' గుండెలుగా ' ' చేసి, చొక్కా అనే పదానికి ముందర 'కి' చేర్చాలి. మూడవ వాక్యంలో నల్లి, అనే పదాన్ని 'నల్లులు' అని మార్చాలి. నాలుగో వాక్యంలో బీర అనే పదాన్ని మార్పు ఏమీ లేకుండా రాయాలి.

1. అసి కొడి ----- | గుడ్డు, గుడ్డి
2. అతన్న బాట ----- | పొట్టిది, పొట్టివాడు
3. పాడిని ----- కుట్టింది | లేలు, లోలు
4. తాళగారానికి ----- ఉంది | పిలక, పలక
5. పాచనాట్లో ----- లేవు | వెన్ను, పన్ను
6. ఇక్కడ రెండు ----- కొట్టు | మేకు, మాకు
7. బట్టలు ----- పోయాయి | మసి, మాసి
8. నాకు నాలుగు ----- కాచాల్సి | పురి, పూరి
9. ----- నేళ్ళు పోయాయి | నేల, నెల
10. అమ్మ ----- పాచ వుంది | బడి, ఒడి
11. వాళ్ళు రోడ్డు ----- | వేస్తున్నాడు, వేస్తున్నారు
12. వాళ్ళద్దరికి రెండు ----- కొన్నాను | రాలు, రైలు
13. అమ్మ బ్రిటికి ----- | వెళ్ళింది, వెళ్ళాడు
14. ఇక్కడ నాలుగు ----- కట్టాలి | రోడు, రాడు
15. రోజంతా ----- ఉన్నారు | మోనం, మానం
16. అతను ----- | మందిది, మందివాడు

17. పర్వత --- ఉన్నాయా? | డబ్బా, డబ్బా |
18. దేవుడు --- తుడవు | తుమ్ము, దుమ్ము |
19. అతను --- కుందీది, కుందీవాడు |
20. --- ఈదుతున్నాయి | బాతు, బాడు |
21. పత్తింలో ఫుల్ని --- ఉన్నాయి | ముక్క, ముగ్గ |
22. చిలక --- పండు లింబోంది | బాతు, బాతు |
23. మా నేనీచులు --- వచ్చారు, వచ్చింది |
24. నేను సిగిమాకి --- వెళ్ళాను, వెళ్ళావు |
25. కలి --- లేదు | తుప్ప - తుక్క |
26. --- ఆకులు లింబోంది | మేక, మేక |
27. --- ముచ్చిడి పళ్ళు ఉన్నాయి | బుట్టు, గుట్టు |
28. అక్షం --- ఉంది | ములు, ముగ్గ |
29. --- చిక్క పడిపోయాయి | దారం, గారం |
30. నేను రెండుకాళ్ళకి పట్టాలు --- వేస్తారు, వేస్తాను |
31. అమె --- వేస్తోంది | ముద్దు, ముగ్గు |
32. కళ్ళి --- పిరిగిపోయాయి | అద్దం, అడ్డం |
33. అది --- డబ్బా | ముండు, ముండు |
34. అన్న పడుచ --- కున్నాడు, కుందీ |
35. ఒక నారింజ --- ఇవ్వు | నోన, నోన |
36. రెండు --- కావాలి | కలి, కది |
37. వాళ్ళింట్లో రెండు --- ఉన్నాయి | కారు బారు |
38. ఒక కట్ట --- తేసుకురా | బీడి, బీడి |
39. పాపకి బొజ్జనామె --- వచ్చింది, వచ్చాడు |
40. అది పూ --- రంద, జండ |
41. రెండు కాళ్ళకి --- కట్టుకో, గడ్డి, గడ్డి |
42. అమె --- చాలా పొడుగు | గుట్టు, బుట్టు |
43. అది బిందీ --- మొక్క, చాక్ |
44. నువ్వు --- వదువుకోవాలి | బాగా, బాగా |
45. అమ్మాయి పాలుతాగు --- తోంది, తున్నాడు |
46. వాడు చాలా --- బిక్క, నక్క |
47. --- నేల తవ్వు | పరగు, పలుగు |
48. అస్పత్రిలో చాలా మంది --- ఉన్నారు | యోగి, యోగి |
49. అయిన --- వింటున్నారు | వారా, వారా |
50. కూర చాలా --- తీర్చి | కారంబగారం |

Name :

Class :

Date :

Task 7 Sentence Acceptability

సూచనలు: క్రింద కొన్ని వాక్యాలు ఇవ్వారు. ఈ వాక్యాలు చదివేటప్పుడు కొన్ని సార్లు వాక్యం తప్పులుగా అనిపిస్తుంది. కొన్ని సార్లు అనిపించదు. మీరు ప్రతివాక్యం చదవండి. తప్పుగా అనిపిస్తే X రాసుకుని కరెక్టుగా అనిపిస్తే '✓' రాయండి.

ఉదా: ఈ వాక్యాలు చదవండి

1. బాలు వెళ్ళింది బల్ల కిందికి X
2. అమ్మ బట్టలో గిన్నెలు తుడుతుస్తుంది A
3. నీన్న తాళయ్య కర్ర పిరిగిపోతుంది A
4. నాన్న రోజూ రికాలో స్కూలుకి వెళ్ళారు ✓

వై వాక్యాలలో మొదట వాక్యంలో పదాలు ముందు వెనుకలుగా రాసారు అంటే బాలు బల్ల కిందికి వెళ్ళింది అని ఉండాలి. రెండవ వాక్యంలో అమ్మ బట్టలో అనడానికి బదులు అమ్మ బట్టలో గిన్నెలు తుడుస్తుంది అని రాశారు మూడవ వాక్యంలో నీన్న తాళయ్య కర్ర పిరిగిపోయింది అనడానికి బదులు పిరిగిపోతుంది అని రాశారు కాబట్టి ఈ మూడు వాక్యాలు తప్పు వాక్యాలు వేటి ఎదురుగా 'X' వెట్టాలి. నాలుగో వాక్యం సరి అయిన వాక్యం ఇందులో తప్పులేదు. కనుక '✓' వెట్టాలి.

1. ముద్దు వెట్టుకొంది పాపని అమ్మ
2. పంపదార కన్న తెన రియ్యగా వుంటుంది
3. తమ్ముడు అప్పుడే బడి ఇంటికి వచ్చాడు
4. నాన్నగారు రోజూ వేషరు చదువుతాడు
5. దేవురు చెత్తంతా ఉడివెయ్య
6. కూరుంది పిల్లి కళ్ళు మూసుకుని
7. లేడు పరుపు మంపం మీర
8. అడవిలో వెద్దవెద్ద చెట్లు ఉంటుంది
9. లోముకో మంచిగా పళ్ళ
10. అమ్మ అన్నం వండుతోంది
11. నేను అమ్మలో బజారుకి వెళ్ళాను
12. అన్నయ్య నాన్నగారు పోడుగు
13. మేము జూ సిటీబిసీలో వెళ్ళాం
14. అన్నయ్య చాలా బరువు వున్నకాల దాగి
15. మాచయ్యలో నేను స్కూలుకు వెళ్ళాడు

16. దిన్న పుడు వేము గొళిలు ఆడతాం
17. నాకు నెక్కిలు తోలడం వచ్చు
18. అన్నం తినరు అమ్మ స్నానం చేయకుండా
19. నేను నీను సరు నొకి వెళ్ళాను
20. గడియారం గంటలు కొడ్తాయి
21. గాలిపటం చెట్టు చుట్టుకు పోయింది
22. ఆ మామిడి పళ్ళ బుట్టు చాలా బిరువు
23. బియ్యంలో వుట్టిగడ్డలు ఉన్నాయి
24. కుక్క మూసం తింటుంది
25. బీరూ పుస్తకాలు ఉన్నాయి
26. ఎక్కలేదు నేను ఎప్పుడు విమానం
27. పాకుతోంది గోడమీద బల్బ్
28. నాన్నగారు భువ్వు ల్లి రోజూ పార్కుకి తేసుకొచ్చారు
29. తాగేసింది పాలు పిల్లి
30. అమ్మ రోజూ చపాటీలు వేస్తుంది
31. నాన్నగారు ఖాకుతో పళ్ళు కొస్తారు
32. బల్బ్ పురుగు తినేసింది
33. అమ్మ నాకూ చెల్లినీ జడలు వేస్తుంది
34. ఆ పుస్తకాలు నావి
35. కమల రావు పుస్తకం ఇచ్చింది
36. అమ్మ జుట్టు నా జుట్టు బెద్దది
37. తమ్ముడు పాపని గిచ్చింది
38. పదుపుతారు నాన్నగారు రోజు వేపరు
39. నేను స్నానం పారయనం తిన్నాను.
40. అమ్మ పూలంటి చాలా ఇష్టం
41. రేపు వేము జుకె వెళ్ళారీ
42. లేదు కుక్క మా ఇంట్లో
43. ఆయన మా ఆక్క కు వేణ నెర్పిస్తారు
44. పాప బొమ్మ పడుకో బెట్టింది
45. గుడి దగ్గుల కొబ్బరికాయలు దారుకుతుంది
46. ఉత్తరాలు రాయరు అమ్మ వెనియూతో
47. ఈ దీరలు ఆక్కడి
48. ఏడిస్తా కళ్ళనుండి నేళ్ళు వస్తాయి
49. పిల్లలు గడ్డిగా అరుస్తున్నాయి
50. ఈ గిన్నెలు మాది కావు

Task 8 Sentence Correction

సమస్యలు కింద కొన్ని వాక్యాలు ఇవ్వారు. ఈ వాక్యాలన్నింటిలోను ఏదో ఒక తప్పు ఉంది ఉదా: ఈ వాక్యాలు చదవండి

తప్పు

ఉప్పు

1. ఉన్నాయి పుట్టనిండా దేవులు

పుట్టలో దేవులు ఉన్నాయి

2. ఇక్కడి బీ అంటే ఇష్టం

ఇక్కడి బీ అంటే ఇష్టం

3. మేము రోజూ రిక్లాలో స్నా లుకి వెళ్ళాము

మేము రోజూ రిక్లాలో స్నా లుకి వెళ్ళాము

4. పాలు నాకు ఇష్టం క్కారు

పాలు నాకు ఇష్టం లేదు

2. వాక్యాలలో మొదటి వాక్యంలో పదాలు ముందు వెనకలయ్యాయి. దాన్ని సరిచేసి పుట్టనిండా మేము ఉన్నాయి అని రాయాలి. రెండో వాక్యంలో ఇక్కడి అని అనకూడదు. ఇక్కడి అనాలి.

3. మే ' ఇక్కడి బీ అంటే ఇష్టం అని రాయాలి. మృదవ వాక్యంలో వెళ్ళాము అనేది తప్పు

మేము రోజూ రిక్లాలో స్నా లుకి వెళ్ళాము అని సరిచేసి రాయాలి. నాలుగో వాక్యంలో కారు అనే

పదం తప్పు పాలు నాకు ఇష్టం లేదు అని రాయాలి. క్రింద ఇచ్చిన వాక్యాలను జాగ్రత్తగా చదివి

తప్పు ఏక్కడవుందో కనుగొని సరిచేసి ఈ వాక్యానికి పడుతూ ఉచితంగా ఉచితంగా చూపిన విధంగా వ్రాయండి.

1. పాలు రోగు లోముకుని పళ్ళు

జి.

2. పాన కళ్యాని కాటక వెట్టు

జి.

3. నేను వేపరకి పడవ చేయగలను

జి.

4. రలుపుని గడియ వేయలేదు

జి.

5. కూడా నేళ్ళు అయిపోయింది

జి.

6. నా నెక్కిలు తమ్ముడి నెక్కిలులో వర్షం

జి.

7. రాడు వీర బట్టలు అరిపోయింది

జ.

8. అమ్మ నాన్న ఇంట్లో లేదు

జ.

9. డాక్టర్ తాతయ్య నీ ఇంజక్షన్ ఇవ్వారు

జ.

10. కుందేలు దుంపలు తింటాడు

జ.

11. బుట్టసిండా కాడిగుడ్డు వుంది

జ.

12. అదీ బంగారు లేదు

జ.

13. రేపు మేము జూకి వెళ్ళాం

జ.

14. వాళ్ళు మా దీవరు కావు

జ.

15. నేను చేసినంతగా త హామీవర్కీ టి.వి చూస్తాను

జ.

16. మా ఇంట్లో టి.వి లేదు

జ.

17. ఈ రంగు వెనిస్‌కూ నాచి లేదు

జ.

18. ఇవాళ శ్మ-మాకు స్కూలు లేదు

జ.

19. అక్క తమ్ముడికి పాతం చెప్పారు

జ.

20. అక్క అప్పుకి జడ వేయమని అడిగింది

జ.

21. మా బాచిలో నేళ్ళు లేదు

జ.

22. నాన్న అమ్మకి ఉరు క్షయైంది

జి. 23. గడ మీద బొమ్మలు వేసింది నేను లేదు

జి. 24. అన్నయ్య బొమ్మలు బాగా వేస్తోంది

జి. 25. అమ్మ నాన్నగారికి బజారు వెళ్ళింది

జి. 26. నీన్న రాము గారి కొబ్బరికాయలు

జి. 27. అక్కగలను చిన్న నెక్కిల్ తమ్ముడు

జి. 28. తెరిన్నే తలుపులు కిక్కిరిస్తోంది వెలుగురు

జి. 29. నిద్రపోయింది దదుపుతూ పుస్తకం అమ్మ

జి. 30. అయన మా పూజయ్య కాపు

జి. 31. నేను నీన్న తాత చెప్పలు కానుకంటాను

జి. 32. పూసింది పువ్వు మా గులాబి మొక్కకి

జి. 33. వెళ్ళిపోయింది తాత ఇంటికి వేయకండా

జి. 34. మేక అక్కలు తింటాయి

జి. 35. అక్క అమ్మతో జడవేసుకుంది

జి. 36. ఆ నేళ్ళదిండలు మాచి లేవు

జి.

Unit: 9 Short term memory

సూచనలు: ప్రతికార్కు మీద నాలుగు పదాలున్నాయి. నేను ఒక్కొక్క కార్కుని కొంచెంసేపు చూపించి వెనక్కి త్రిప్పి వెడ్డాను. నేను అలా చేసిన వెంటనే నువ్వు ఆకార్కు మీద చూసిన పదాల్ని గుర్తు తెచ్చుకుని కాగితం మీద రాయాలి.

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1. ముక్క - తుక్క - మాత్ర - పాత్ర

2. పాకు - నాకు - పాప - చాప

3. లోకం - తోకం - తోడు - లక్ష

4. తూర్పు - కూర్పు - తిరవ్వు - ఇరవ్వు

5. వానం - మొనం - వానం - వానం

7. మొగ - మొగ్గ - డీమ - డీము

8. వాదం - వేదం - భ్రమ - బ్రహ్మ

9. కొరు - గొరు - ధర్మం - వర్మం

10. పక్క - లక్క - రాగం - యాగం

11. ఆకు - ఆరు - తొక - తేలు

12. దెయ్య - నెయ్య - పన్ను - కన్ను

13. బల్ల - బాలు - కాలు - కేలు

14. కత్తి - కొత్తి - చీర - చెత్త

15. సబితా - - మామిడి - - కాలు - - చాలు

16. పిల్లి - - పళ్ళె - - గుడి - - గోడ

17. వేలు - - నీలు - - మేలు - - తోలు

18. పెన్ను - - పేరు - - బుట్టు - - జబిత

19. నడి - గది - - వడి - గడి

20. గాజు - రాజు - కుక్క - ముక్క

పనిలో శ్రద్ధ

కేశవవర్మ అనే జమీందారు అడు తమ్మెన ముదిరాన్ని నిర్మించునుచునీ అందుకు వేరెన్నికగన్న శిల్పుని రప్పించాడు. వారికి వేరాచారిని నాయకడిగా నియమించాడు.

వేరాచారి పనిలో ఉన్నంతసేపూ ఉత్సాహంగా ఉండేవాడు. కానీ ఉత్సాహం దిగులుగా ఉండేవాడు. జమీందారుకి విషయం తెలిసింది. వేరాచారిలో దిగులుపోలే మరింతనేర్పుగా పనిచేయగలడనిపించి ఒక రోజు ఆయన అతడిని కలుసుకుని దిగులుకు కారణమడిగాడు.

“నా ఇల్లున్న ప్రాంతంలో బావులన్నీ ఎండిపోయాయి. పృథిరోజూ నా భార్య మూడు కోలు దూరం వెళ్ళి నీరు తెచ్చుకోవాలి. నేనుంటే తనకు నీళ్ళు తెప్పవెట్టేవాణ్ణి. ఇప్పుడు అడవి - ఒక్కర్లే పని చేసుకోవాలని నా దిగులు” అన్నాడు వేరాచారి.

తన ముదిరం వల్ల వజ్రాలకే ఉపయోగంలేదనే సామాన్యులకు సదుపాయాలు ముఖ్య వసరమనే జమీందారుకు తెలిచివచ్చి ఆయన తన ఏలుబడి ప్రాంతంలో ఎక్కడా నీటిపెద్దడి లేకుండా ఏర్పాట్లు చేయించాడు.

ఆ తర్వాత జమీందారు తలవెట్టిన అడు త భవన నిర్మాణంలో పృథి శిల్పి ఎంతో శ్రద్ధగా పనిచేశాడు.

క్రింద ఇవ్వబడిన ప్రశ్నలకు, సూచించిన జవాబులలో సరి అయిన దానిని గుర్తిండుము

1. కేశవవర్మ ఎవరు?

ఎ. జమీందారు బి. రాజు సి. శిల్పి డి. పనివాడు

2. కేశవవర్మ ఎవరిని పిలిపించాడు?

ఎ. శిల్పులను బి. నేపాథులను సి. పనివాళ్ళను డి. వద్దలను

3. కేశవవర్మ ఎందుకు శిల్పులను పిలిపించాడు?

ఆద్యులమైన నే ----- కట్టించడానికి

ఎ. గుడి బి. మందిరం సి. పాతశాల డి. భవనం

4. వేరాచారి ఎవరు?

ఎ. నేపాథుడు బి. జమీందారు సి. శిల్పి డి. నేపాథుడు

5. వేరాచారి ఎవరికి నాయకుడు?

ఎ. పనివారికి బి. వద్దలకు సి. శిల్పులకు డి. జమీందారుకి

6. వేరాచారి పనిచేసేటప్పుడు ఎలా వుండేవాడు?

ఎ. సంతుష్టంగా బి. విసుగ్గా సి. తృప్తిగా డి. దిగులుగా

7. వేరాచారి పనిచేసేటప్పుడు ఎలా వుండేవాడు?

ఎ. దిగులుగా బి. ఉత్సాహంగా సి. సంతుష్టంగా డి. విసుగ్గా

8. వేరాచారి దిగులుగా కారణం ఏమిటి?

ఇంటి దగ్గర -----

ఎ. నేళ్ళు లేకపోవడం బి. భార్య నేళ్ళు మోయుడం

బి. తను భార్యకు సహాయం చేయలేకపోవడం డి. పనిలేకుండా ఖాళీగా వుండడం

9. వేరాచారి జవాబువల్ల జమీందారు ఏమి చెబుతున్నాడు?

ఎ. సామాన్యుల ఆవసరం బి. వేరాచారి ఆవసరం

సి. తన ఆవసరం డి. మందిర నిర్మాణావసరం

10. వేరాచారి జమీందారుకి ఏమి సమాధానమిచ్చాడు?

ఎ. తనున్న ప్రాంతంలో నేళ్ళు లేవని

బి. తన భార్య కష్టపడుతుందని

సి. తన భార్యకు తను సహాయం చేయలేకపోయానని

డి. తనకు పనిలేకుండా ఖాళీగా వుందని

11. వేరాలి జవాబు విన్న తర్వాత జమీందారు ఏం చేశాడు? ||
- తన ఏలబడి ప్రాంతంలో ----- కట్టించాడు
- ఎ. నేటివసతి బి. పని సి. సాకర్కం డి. అన్ని వసతులు
12. జమీందారు ముదిర నిర్మాణంలో మొదట శిల్పులు ఎలా పనిచేశారు ||
- ఎ. ఉత్సాహంగా బి. నిరుత్సాహంగా సి. ఆశ్రద్ధగా డి. శ్రద్ధగా
13. జమీందారు నేటివసతి కట్టించిన తర్వాత ఏ విధంగా శిల్పులు పనిచేశారు? ||
- ఎ. ఉత్సాహంగా బి. దిగులుగా సి. ఆశ్రద్ధగా డి. శ్రద్ధగా
14. ఎందువల్ల శిల్పులు మొదట నిరుత్సాహంగా పనిచేశారు? ||
- వారున్న ప్రాంతంలో ---క--- లేకపోవడం వలన
- ఎ. ఆహారం బి. నేరు సి. పని డి. డబ్బు
15. నేటివసతిని కట్టించిన తర్వాత శిల్పులు ఎందువల్ల శ్రద్ధగా పనిచేశారు? ||
- సమస్య లేకపోవడం వలన పనిశ్రద్ధగా చేశారు
- ఎ. ఇంటి బి. నేటి సి. ఆహార డి. పని
16. ఈ కథలోని సారాంశమేమి? ||
- సామాన్యులకు ముఖ్య అవసరం -----
- ఎ. పని బి. డబ్బు సి. సమస్యలు డి. నేరు
17. ఈ కథలోని నేటి ఏమిటి? ||
- ముఖ్య వసరాలు లేరకపోతే మనుషులు పనిని -----
- ఎ. చేస్తారు బి. చేయరు సి. ఆశ్రద్ధ చేస్తారు డి. శ్రద్ధగా చేస్తారు
18. జమీందారు వేరాలి దిగులును ఎందుకు పోగొట్టాడు? ||
- వేరాలి దిగులు పోగొడితే వేరాలి పనిని -----చేస్తాడని జమీందారు భావించాడు
- ఎ. ఎక్కువ నేర్పుగా బి. శ్రద్ధగా సి. ఉత్సాహంగా డి. అశక్తిగా
19. వేరాలి పరిస్థితిలో నువ్వుంటే ఏం చేసేవాడివి? ||
- ఎ. పనిమానేస్తాను బి. 'దిగులుపడతాను' సి. ఇంటిపనిచేసి పనిచేస్తాను
- డి. ఇంటి గురించి ఆలోచించను ఈ. ఇంకేదయినా ఉంటే క్రింద వాయండి
20. ఈ కథ ప్రకారం పనిలో శ్రద్ధ ఎప్పుడు వస్తుంది? ||
- ఎ. అవసరం ఉన్నప్పుడు బి. నిత్య వసరాలు లేనిప్పుడు
- సి. అసక్తి ఉన్నప్పుడు డి. అవకాశం ఉన్నప్పుడు

21. ఈ కథకు 'పనిలోశ్రద్ధ' అని ఎందుకు పేరు పెట్టారు?

ఎ. ఈ కథ పనిలో శ్రద్ధ ఎప్పుడు వస్తుందో చెప్పింది కావున

బి. ఈ కథ పనిలో శ్రద్ధ ఉండాలి అని చెప్పింది కాబట్టి

సి. ఈ కథలో జమీందారు శిల్పుల పనిలో శ్రద్ధ కల్పించాడు కాబట్టి

22. జమీందారు స్నానంలో నువ్వుంటే ఏమి చేస్తావు?

ఎ. జమీందారులాగే చేస్తాను బి. శిల్పుల అవసరాలు పట్టించుకోను

సి. శిల్పులు పనిచేశారా లేదా అని ముగ్ధమే చూస్తాను

డి. మందీర నిర్మాణ చేయను

ఈ. ఇంకేదైనా వుంటే వ్రాయండి

23. ఈ కథలో ఎన్ని పాత్రలు వచ్చాయి?

ఎ. రెండు బి. మూడు సి. నాలుగు డి. అయిదు

24. ఈ కథలోని పాత్రలు ఏవి?

ఎ. వేరూరి, జమీందారు బి. శిల్పులు సి. వేరూరి, జమీందారు, శిల్పులు

డి. వేరూరి, జమీందారు, శిల్పులు, వేరూరి భార్య

25. ఈ కథ ఎవరిని ఉద్దేశించి వ్రాయబడినది?

ఎ. డబ్బున్నవారికి బి. మధ్య తరగతి కుటుంబీకులకు

సి. పేదవారికి డి. అందరికీ

2. ఈ క్రింద ఇవ్వబడిన వాక్యములు సరి అయినవా లేదా లెల్పి సరి అయితే ✓

చేయాలి, తప్పు అయితే ✗ వేసి తప్పుడు వాక్యాన్ని కథను అనుసరించి సరిదిద్ది వ్రాయుము

ఉదా: 1. వేరాలి భార్యకు సహాయం చేస్తాడు ✗

సరి అయిన వాక్యము: వేరాలి తన భార్యకు సహాయం చేయలేకపోయాడు

1. జమీందారు మంచి వ్యక్తి

2. వేరాలి మంచి వ్యక్తి

3. శిల్పులు మొదటి నుండి ఉత్తమంగా పనిచేశారు

4. వేరాలికి భార్య నేళ్ళు కేసుకొస్తుందని దిగులు లేదు

5. జమీందారు వేరాలిని చూచి దిగులుపడ్డాడు

6. జమీందారు వేరాలి దిగులు పోగొట్టాడు

7. జమీందారు సామాన్యుల ముఖావసరాలకన్న తన భవన నిర్మాణ ముఖ్యమని అనుకున్నాడు

8. సామాన్యుల సమస్యలూ తీరిస్తే వారు ఇ బాగా పని చేస్తారు

9. వేరాలి శిల్పుల నాయకుడు

10. కేశవవర్మ ఒక మంచి శిల్పి

11. కేశవవర్మ తన పిల్లలుడి ప్రాంగంలో నీటి వనది కల్పించాడు

12. వేరాలి భార్య ప్రతిరోజు మూడు కోట్లు దూరం నుండి నేరు తెస్తుంది

13. కేశవవర్మ తన మందిరం వలన ప్రజలకు ఉపయోగం లేదని తెలుసుకున్నాడు

14. పనిలో లేనప్పుడు వేరాలి ఉత్తమంగా వుండేవాడు

15. నీటి వనది కల్పించిన తరువాత శిల్పులు భవన నిర్మాణంలో ఆశక్తిగా పనిచేశారు.

16. వీరాచారి సిగ్గులు తెలుసుకొని జమీందారు ముదిర నిర్మాణం ఆపేశాడు

17. కోశవర్మ ఒక జమీందారు

18. వీరాచారి ఒక జమీందారు

19. కోశవర్మ వీరాచారి నేపాథులు

20. కోశవర్మ ముదిర నిర్మాణం పూర్తి చేశాడు

111. ఈ క్రింది ప్రశ్నలకు జవాబులివ్వు

1. జమీందారు చేసిన పని సరి అయినదా? కాదా? ఎందువలన?

2. ఈ కథలో జమీందారు మంచి వ్యక్తా? కాదా? ఎలా చెప్పగలవు?

3. ఈ కథలో ఎన్ని పాత్రలు వున్నాయి? వాటి వర్ణనలు వ్రాయుము?

4. వీరాచారికి తన భార్యవైన మేమ వుందా? లేదా? ఎలా చెప్పగలవు?

5. ఈ కథలో జమీందారుకు శిల్పులవై ఆభిమానము వుందా? లేదా? ఎలా చెప్పగలవు?

4. ఈ క్రింద ఇవ్వబడిన వాక్యములను పఠించి ఇవ్వబడిన కథలను వరుసక్రమంలో వ్రాయుము

1. వీరబాళి పనిలేనప్పుడు దిగులుగా వుండేవాడు

2. జమీందారు తన పిల్లలది పొంతంలో నేటివసతిని కల్పించాడు

3. వీరబాళి ఒక వేరెన్నికగన్న శిల్పి

4. కోవవర్మ ఒక జమీందారు

5. కోవవర్మ అడు తమ్మైన భవనం నిర్మించాలని నిర్ణయించాడు

6. కోవవర్మ వీరబాళిని శిల్పులకు నాయకుడగా నియమించాడు

7. కోవవర్మ వేరెన్నికగన్న శిల్పులను పిలిపించాడు

8. వీరబాళి భార్య వ్రతరేఖ మూడు కొర్రలు దూరం నుండి నేరు తెప్పింది

9. కోవవర్మ తన మందిరం వలన వ్రయోజనం లేదని తెలుసుకున్నాడు

10. వీరబాళి పనిలేనప్పుడు దిగులుగా వుండడం జమీందారు గమనించాడు

11. సామన్యులకు సద్దుపాయాలు ముఖ్య వసరమని జమీందారు తెలుసుకున్నాడు

12. వీరబాళి దిగులును పోగొట్టాలని జమీందారు అనుకున్నాడు

13. వీరబాళి తన దిగులుని కారణం తన భార్య కష్టపడుతుంటే సహాయం చేయలేక పోవడమని భావించాడు

14. నేటి వసతిని కల్పించిన తర్వాత శిల్పులందరూ భవన నిర్మాణంలో ఎక్కువ శ్రద్ధతో పనిచేశాడు

15. పనిలో శ్రద్ధ తెప్పించాలంటే ముఖ్య వసరాలు లేరని జమీందారు తెలుసుకున్నాడు

5. ఈ క్రింద ఇవ్వబడిన సారాశములలో ఏది మేరు చదివిన కథకు సరి అయిన సారాశమో సూచించుము

1. కోశవర్మ జమేందారు. ఆతను ఆదు తమ్మైన ముదిర నిర్మాణానికి శిల్పులను పిలిపిరేదే వేరాచారిని నాయకుడిగా చేశాడు. వేరాచారి పనిలేనప్పుడు దిగులుగా వుండటం గాన గమనించి కారణం అడిగి తెలుసుకున్నాడు. ముదిర నిర్మాణం కన్నా సదుపాయాలు సామాన్యులకు ముఖ్య అవసరమని తెలుసుకొని, తన ఏలుబడి ప్రాంతంలో నేటివసతి కల్పించాడు. ఆ తర్వాత శిల్పులు ముదిర నిర్మాణంలో ఎక్కువ శ్రద్ధగా పాల్గొన్నారు.
2. కోశవర్మ అనే జమేందారు ఆదు తమ్మైన ముదిర నిర్మాణానికి శిల్పులను పిలిపించి వేరాచారిని నాయకుడిగా చేశాడు. వేరాచారి దిగులుకి కారణం తెలుసుకోవడం ద్వారా సామాన్యులకు సదుపాయాలు ముఖ్య అవసరం అని తెలుసుకొని నేటివసతిని కల్పించాడు. తర్వాత శిల్పులు ముదిర నిర్మాణంలో శ్రద్ధగా పాల్గొన్నారు.
3. కోశవర్మ అనే జమేందారు వేరాచారి దిగులుకి కారణం తెలుసుకొని తన ఏలుబడి ప్రాంతంలో నేటి ఎద్దడి లేకుండా చేశాడు. తర్వాత ముదిర నిర్మాణం చేశాడు.
4. కోశవర్మ ఆర్థిక ముదిర నిర్మాణానికి శిల్పులను పిలిపించాడు. వేరాచారి భార్య నేళ్ళు మోసుకు వస్తుందని దిగులుగా వుండేవాడు. అందువలన జమేందారు నేటి వసతి కల్పించాడు తర్వాత ముదిర నిర్మాణం చేశాడు.

6. ఈ క్రింది కథలోని కొంతభాగము మాత్రము వ్రాయబడినది. కథను చదివి మిగిలిన భాగమును పూర్తి చేయుము

జమేందారు వేరాచారి దిగులుకి కారణం తెలుసుకున్నాడు. సామాన్యులకు సదుపాయాలు ముఖ్యమని తెలుసుకొని, తన ఏలుబడి ప్రాంతంలో నేటి ఎద్దడి లేకుండా చేశాడు. ఆ తర్వాత

మందిర నిర్మాణంలో శిల్పులు శ్రద్ధగా పని చేశారు.

2. కేశవవర్మ ఒక జమీందారు. అతను అడు తమ్మైన మందిర నిర్మాణం చేయాలని నిర్ణయించాడు. వేరెన్ని కగన్న శిల్పులను పిలిపించాడు. వేరాలిని నాయకుడిగా నియమించాడు. వేరాలి పనిలో ఉన్నప్పుడు ఉదాహరణగా వుండేవాడు. పనిలేనప్పుడు దిగులుగా వుండేవాడు.

3. కేశవవర్మ ఒక జమీందారు. ఒక అడు తమ్మైన కేశవ నిర్మాణానికి వేరెన్ని కగన్న శిల్పులను పిలిపించాడు.

- - - - తన ఏలుబడి ప్రాంతాలలో నది ఎద్దడి లేకుండా చేశాడు. ఆ తర్వాత మందిర నిర్మాణంలో శిల్పులు శ్రద్ధగా పనిచేశారు.

Name: A. K. Srinivas Class: 8

Date: 22/8/97

Task 11 Identification of equivalent meaning

క్రింది కొన్ని వాక్యాలు ఇవ్వారు. ప్రితి వాక్యం క్రింది మూడు వాక్యాలు ఇవ్వారు.

ఈ మూడు వాక్యాలలో ఒక వాక్యం ప్రితి వాక్యం ఆర్థానికి దగ్గరగా వుంటుంది

ఉదా: నాకు లెక్కలు చాలా కష్టంగా ఉంటుంది

ఎ. నాకు లెక్కలు చేయడం రాదు

బి. నాకు లెక్కలు అర్థం కావు ✓

సి. నాకు లెక్కలు ఇష్టం లేదు

నాకు లెక్కలు చాలా కష్టంగా ఉంటుంది అనే వాక్యానికి క్రింద ఇచ్చిన మూడు వాక్యాలలో

|| బి || నాకు లెక్కలు అర్థం కావు. అనే వాక్యం దగ్గరగా వుంది కనుక దానికి "✓" వేద్దామి.

1. మా దీవరు బాగా పాతం చెప్పారు

ఎ. మా దీవరు చెప్పే ప్రితిం బాగా అర్థం అవుతుంది

బి. మా దీవరు నవ్వు తూ పాతం చెప్పారు

సి. మా దీవరు పాతం చెప్పే నోట్లు ఇస్తారు

2. నాకు సినిమాలు నచ్చవు

ఎ. నాకు సినిమాలంటే బోరు

బి. నేను సినిమాలు చూడనా

సి. నాకు సినిమాలంటే ఇష్టం లేదు.

3. రాము పాటలు బాగా పాడుతాడు

ఎ. రాము పాటలు నేర్చుకొన్నాడు

బి. రాము పాటలు పాడితే బాగుంటుంది

సి. రాముకి పాటలంటే ఇష్టం

4. ట్రాపిక్ రూల్స్ పాటించకపోతే ప్రమాదాలు అవుతాయి

ఎ. ట్రాపిక్ రూల్స్ పాటించాలి

బి. ట్రాపిక్ రూల్స్ వల్ల ప్రమాదాలు అవుతాయి

సి. ట్రాపిక్ రూల్స్ గమనించక పోవడం వలన ప్రమాదాలు జరుగుతాయి ✓

5. ఇక్కడు కొర్టు చదివితే ప్రజలకు నేప చేయవచ్చు

ఎ. ఇక్కడు ప్రజలకు నేప చేస్తారు ✓

బి. ఇక్కడు కొర్టు చదివితే ప్రజల రోగాలు నయం చేయవచ్చు ✓

సి. ఇక్కడు కొర్టు చదివితే ప్రజలు నేప చేస్తారు

6. చదువు వలన చాలా విషయాలు తెలుస్తాయి.
- ఎ. చాలా విషయాలు తెలియాలంటే చదువుకోవాలి
- బి. చాలా విషయాలు తెలుసుకోడానికి చదువు లోడ్బుడుతుంది
- సి. చదివితే చాలా విషయాలు తెలుస్తాయి
7. చదువుకుంటే మంచి ఉద్యోగాలు రావచ్చు
- ఎ. చదువుకున్నవారికి మంచి ఉద్యోగాలు వస్తాయి
- బి. మంచి ఉద్యోగాలు రావడానికి చదువు సహాయపడుతుంది
- సి. మంచి ఉద్యోగాలు చదువుకోకపోతే రావు.
8. వ్యాయామం చేస్తే ఆరోగ్యం బాగుంటుంది
- ఎ. వ్యాయామం చేయే వేస్తే ఆరోగ్యంగా వుండదు
- బి. ఆరోగ్యంగా వుండాలంటే వ్యాయామం చేయాలి
- సి. వ్యాయామం చేయకపోతే ఆరోగ్యంగా వుండరు
9. నాకు పుల్లడి పళ్ళు పడవు
- ఎ. పుల్లడి పళ్ళు తింటే నాకు జబ్బు చేస్తుంది
- బి. నేను పుల్లడి పళ్ళు తినను
- సి. పుల్లడి పళ్ళు నాకు నడువు
10. పాగ తాగితే కానవ్వు రావచ్చు
- ఎ. కానవ్వు రావాలంటే పాగ తాగాలి
- బి. పాగ తాగకపోతే కానవ్వు రాదు
- సి. పాగతాగితే కానవ్వు వచ్చే అవకాశం వుంది

Name:

Class:

Date:

Task 12

సూచనలు: ఈ క్రింద ఒక కథ ఇవ్వారు. ఈ కథలో అక్కడక్కడ కొన్ని ఖాళీలు ఉన్నాయి. కథ జాగ్రత్తగా చదువుతూ మధ్య వచ్చే ఖాళీలను కథకు అర్థం అయ్యేట్లుగా పూర్తి చేయండి. ఉదా: మొదటి వేరలో నే _____ వి పాటి దో చూస్తాను. నాలో వాదించు అంటూ ఒక రోజున నవాలు చేశారు. ఇక్కడ విష్ణుశర్మ పండితుడు కాబట్టి ఈ ఖాళీలో " పాండిత్యం" అనే పదం కథకి సరివచ్చుంది. కనుక ఈ ఖాళీని " పాండిత్యం" అనే పదంతో పూర్తి చేయాలి.

పండిత తత్త్వం

రత్నగిరి అగ్రహారంలో విష్ణుశర్మ అనే మహా పండితుణ్ణి అంతా గౌరవించేవారు. అది చూసి ఓర్వాలక దంభుడనవాడు, 'నే పాండిత్యం వి పాటిదో చూస్తాను. నాలో వాదించు అంటూ ఒక రోజున నవాలు చేశాడు.

విష్ణుశర్మ నవ్వి, " నోలో వాదించేపాటి పాండిత్యం నాకు _____ అన్నాడు. దంభుడు రొమ్ము పిరుచుకొని మహా గర్వపడుతూ _____ వెళ్ళాడు.

కొన్నాళ్ళకు హరుగూరి నుండి గోపేందరాజు అనే _____ వచ్చి, అయ్యా మీ ఉళ్ళో నా పాండిత్యం _____ ఉంది. అందుకు తమరేర్పాటు చేయగలరా? అని విష్ణుశర్మను _____.

"ఇద్దరు పండితులు పోటీపడితిన పాండిత్య ప్రదర్శన _____ తమకు అంగీకారమైతే నేను మీతో పోటీ పడతాను" _____ విష్ణుశర్మ. గోపేందరాజు సరేనన్నాడు.

ఇద్దరికీ పోటీ _____ ఈ ఊరంతా ఆ పాండిత్య ప్రదర్శనకు పంతో సంతోషించారు. _____ విష్ణుశర్మకు నమస్కరించి, " పాండిత్యంలో నేను తమరి కాలిగొట్టికి _____ నాలో అహంకారముందే అది ఈనాటితో వోయింది" అని _____ విష్ణుశర్మ భార్య దీనికెంతో ఆశ్చర్యపడి, అట్టే పాండిత్యం _____ ధంమడి ముందు తలవంచారు. మహా పండితుడైన గోపేందరాజును _____ పురిగొల్పి పోటీకి సిద్ధం చేసి ఓడించారు. మే _____ నాకు బోధపడలేదు" అంది.

అందుకు విష్ణుశర్మ నవ్వి, " _____ మూర్ఖుడు. పండితులు మూర్ఖుడితో వాదించకూడదు. అలా _____ నేనూ మూర్ఖుణ్ణే అవుతాను. వాడితో వాదించక పోవడంవల్లనే _____ నా పరపతి పెరిగింది. కానీ గోపేందరాజు పండితుడు. వాదించకపోతే అది నా అసమర్థత అవుతుంది. నా _____ పరీక్షించుకుందుకూ అతడే సరైన ప్రశ్నార్థి ఎవరితో పోటీపడాలో, _____ పోటీ పడకూడదో తెలియడమే ఆసలు" నీసలు పండిత లక్షణం". అని భార్యకు అసలు విషయం చెప్పాడు.

స్తానములు! ఈ క్రింద ఒక కథ ఇవ్వారు. ఈ కథలో అక్కడక్కడ కొన్ని భాగాలు ఉన్నాయి.

కథ జాగ్రత్తగా చదువుతూ మధ్య వచ్చే భాగాలను కథ ఆర్థం అయ్యేట్లుగా పూర్తి చేయండి.

ఉదా: అలా రోజులు గడిచిపోయాయి. ఏళ్ళు గడిచాయి. దశాబ్దాలు ----- శత్రుత్వమున్న

మామూర్లు కాలం చేశారు. శివయ్య, కోశవయ్య ----- లాశలయ్యారు.

మొదటి భాగంలో 'గడ్డివాంట్లు', రెండవ భాగంలో 'క్రూడా' అనే పదాలు సరిపోతుంది. కనుక

ఈ భాగాలను 'గడ్డివాంట్లు', 'క్రూడా', అనే పదాలతో పూర్తి చేయాలి.

చైత్రు, చైత్రరసి జ్ఞాపకాలు

శివయ్య, కోశవయ్య పొద్దుతులు. జీవితాంతం కలిసి ఉండాలనుకున్నారు. ఆ సమయంలో ఇద్దరికీ ఒకేసారి వెళ్ళి సంబంధాలు వచ్చాయి. మామూర్లద్దరూ ధనవంతులే కానీ బద్ధశత్రువులు.

పేదరికంలో ఉన్న శివయ్య, కోశవయ్య ఇల్లరికానీ కొప్పుకుమీ వెళ్ళిళ్ళు చేసేకున్నారు. చెరో ఊరు వెళ్ళిపోయారు. మామూర్ల బద్ధ శత్రుత్వం కారణంగా వాళ్ళు మళ్ళీ ఒకరినొకరు మానుకోలేదు.

అలా రోజులు గడిచిపోయాయి. ఏళ్ళు గడిచాయి. దశాబ్దాలు గడ్డివాంట్లు శత్రుత్వమున్న మామూర్లు కాలం చేశారు. శివయ్య, కోశవయ్య క్రూడా లాశలయ్యారు.

శివయ్యకు మనోహర్ ఒక్కడే మనముడు. వాడిది ----- తల్లి వారిక. కోశవయ్యకు మలలి ఒక్కగానక్క. భునుమరాలు. ----- పూర్తిగా మేనమామ వారిక.

ఇప్పుడు రెండు ఆంకాలు ----- వాళ్ళవరూ లేరు కాబట్టి రెండు కుటుంబాల్నూ ఒకటి ----- మీత్తు బిడ్డరూ సంకల్పించారు. మనోహర్ కి, మలలికి వెళ్ళి జరిపించాలని ఆశ్రయాలు వ్రాసుకున్నారు.

మనోహర్ పెద్దల మాట జవదాచి ----- అయితే వాడికి వెళ్ళి పిషయంలో ఒక అసంతృప్తి -----.

శివయ్యకు రెన లాశ దిన్న నాటి మీత్తుడు. ఆ రెనాల వాళ్ళకు వెళ్ళి వెళ్ళి బిడ్డలు కలిగారు, ఆ బిడ్డలకు ----- కలిగారు కానీ వాళ్ళు మాత్రం ఒక్కసారి కూడా ----- అలాంటి నేనామూ ఒక నేనామో? ఆ నేనా ----- ఈ వెళ్ళి చేసేకోవడం సబబుగా ఉంటుందా?

మనుషడి ----- శివయ్య నమ్మి, 'పెద్దల మేద గౌరవం కాదే' ----- ఒకరినొకరు కలుసుకోలేదు కానీ మో ----- సామాన్యమైనది కారు. ఇప్పటికీ మా పాత జ్ఞాపకాలు ----- చెదరలేదు. కలుసుకున్నా కలుసుకోకపోయినా ఒకరి గురించి ----- తరచూ ఆరాలు తేసి

విలువనుబట్టి వాటిని వాటికి కేటగిరి. సరిగ్గా నేను ఉత్తరం
----- మీ కోసం మీ కోసం ఉత్తరం వ్రాయడం మా -----
విలువనుబట్టి వాటిని వాటికి కేటగిరి.

తెలుసుకుంటావే అదే తెలిసింది దాని రేపింది. సరిగ్గా నేను ఉత్తరం
..... మా కోవయ్య దురా పర్వం వాయదం మా
ముఖపు కాదా? అన్నాడు.

“ అ ముఖపు కాదా? తెలిసింది ” అన్నాడు మనహరే.

“ అందులో రిపోర్ట్ చేయమిదాని ఇంకాకాకంగా మేము ఒకరినొకరు
మానుకోలేదు కదా ఒకరినొకరు గుర్తుపట్టగలిగితే అది అశవయ్యం
కానీ కోవయ్య మా మానుకోలేదని నీవు గుర్తుపట్టితే అశవయ్యమే కదా అందులోనూ నీవి
నా పోలికలు అవును ” అన్నాడు శివయ్య.

దీనికి మనహరే ఎంతో “ అదే నిజమైతే నేను మాలి ముఖం కూడా
..... నీ పోలికలు తెలుసుకుంటాను ” అన్నాడు.

సరిగ్గా ఇలాంటి కోవయ్య ఇంట్లోనూ జరిగాయి.

ఈ విషయం ఇంట్లోని అదే బంధుమిత్రులకూ దా అశవయ్యని కలిగింది.
ఈ గుర్తుపు నేనెవరినో కనుగొనడానికి ఎదురు మాడసాగారు.

..... పూర్వం మనహరే ఇంట్లో వాడి వయసు వారినే పదిమందిని జతపరిచారు.
అందరికీ ఒకే కం దున్నులు అంతా కలిసి కోవయ్య ఊరికి తరలి
వెళ్ళారు. కోవయ్య కంటపడకూడదని విడిదీందాని వేరే అస వేశారు.

కోవయ్య ఇంట్లో కూడా అలాగే మాలి వయసు పిల్లల్ని మరో పది
మందిని అందరికీ ఒకేరకం దున్నులు వేశారు.

..... కోవయ్య మనహరేని అలా నిండానికి విడిదీందానికి తరలి
అయినా అదేవాళ్ళవద్దూ లాంటి ముందుగా అనుకున్న ఏర్పాటు

కోవయ్య, శివయ్య కలిసి ఒకరినొకరు సుఖంగానే గుర్తుపట్టారు. కోవయ్య
అక్కడను యువకులందరికీ పరీక్షగా మనీ వారిలో సుఖంగా గుర్తుపట్టి, “ ఇప్పుడైతే
ముసలితనం వల్ల మా కళ్ళు దిన్నపిగా కనబడుతున్నాయి కానీ, నీ వయసులో
అవుం ఇలాగే వీళ్ళు నేర్పాటు. నీవు గుర్తుపట్టడానికి నీ కళ్ళు బాలు ” అన్నాడు.
అందరూ అశవయ్య పోయారు.

..... తల్లారే అంతా అక్కడికింది బయల్పేరి కోవయ్య ఇంట్లోకి శివయ్య
అక్కడను యువకులందరికీ పరీక్షగా మనీ వారిలో దగ్గరగా వెళ్ళి, “ అమ్మా డబ్బు బాగా
ఎక్కువై లానే ఇప్పుడు పొగరూ ఉంటున్నాడు కానీ దిన్నపడు ఉన్నప్పుడు అప్పు
నేలాగే బుద్ధిగా చేతులు వెనక్కు కూర్చుని అమాయకంగా మాన్సుండేవాడు. ఆ కూర్చున్న
తేరు, --- మాపులు బాలు నాకు నీవు గుర్తుపట్టడానికి

అప్పుడు వారందరూ ఇది చూసి ఆశ్చర్యపోయారు.

మనోహరే, ----- కూడా అప్పుడా నందాలతో ముడిపిపోయా, " ఇలాంటి స్నేహితుల కుటుంబాలు రెండూ మా మూలంగా మళ్ళీ కలుసుకుంటున్నాయంటే అది మా ఇద్దరికీల గర్వకారణం" అన్నారు.

ఆ తర్వాత మనోహరేకే, మూలకేకే వైభవంగా వివాహం జరిగింది. || రెండు కుటుంబాలూ ఈసారి శాశ్వతంగా ఒకటయ్యాయి.

Task : 14

నాని కుడి తెలివి

రామయ్య తెలివైనవాడు. నాని కుడు. తెలివైన వాళ్ళందరూ నాని కునే కాబుంటాడు. భీమయ్య బుద్ధి కుడు. ముడివాడు. ముడి వాళ్ళందరూ దేవుణ్ణి నమ్మటాని ఇండాడు. ఒకసారి రామయ్య, భీమయ్య సంతలో కలుసుకున్నారు. ఒకరి శిష్యా యారారు తెలుసుకున్నారు. వాదించుకున్నారు.

"దేవుణ్ణి నమ్మ కపోలే నువ్వు చెడ్డవనులు చేస్తావు. ముడివాడూ బ్రతుకలనుకుంటే నువ్వు దేవుణ్ణి నమ్మ రి". అన్నాడు భీమయ్య.

"నేను చెడ్డ వనులు చేస్తున్నానని ఒక్కడి చేత చెప్పుదు మార్గాం అన్నాడు రామయ్య సవాలు చేశాడు."

"దేవుణ్ణి నమ్మ కపోవడమే చెడ్డవని" అన్నాడు భీమయ్య ఎంటవే

"ఇలా మాట్లాడే వాళ్ళని మూర్ఖులంటారు. దేవుణ్ణి నమ్మ నీ వాడిలా మాట్లాడడు. దేవుణ్ణి నమ్మితే తెలివితేటలు నశిస్తాయి. తెలివి లేకపోతే దీపిగంలో చాలా ఇటుంది పదాలి అన్నాడు రామయ్య."

"నేను తెలివి లేకకు వవాడినని ఒక్కడిచేత చెప్పుదు మార్గాం" అంటూ భీమయ్య సవాలు చేశాడు.

"దేవుణ్ణి నమ్మడం కంటే తెలివితక్కువతనం ఏముంది? అన్నాడు రామయ్య తడుముకోకుండా.

"అలలు నువ్వు దేవుడినెందుకు నమ్మవు? అన్నాడు భీమయ్య ముడు భీమయ్య నువ్వు న్నా వంటి నమ్మ రాను. ఎదురుగా కనిపిస్తున్నావు కాబట్టి. కంటిది కనిపింపని భగవంతుణ్ణి ఎలా నమ్మే ది? అన్నాడు రామయ్య."

"దేవుడు కంటికి కనిపింపడు అయిన సరాంతరామి. ఎక్కడపడితే అక్కడ ఉన్నాడు అన్నాడు భీమయ్య."

"ఉన్నాడని నువ్వుంటున్నావు. కానీ ఏదీ, నాకు కనిపింపడేం? నాకు చూపిండు లేదా లేదని నువ్వు చెప్పుకో" అన్నాడు రామయ్య.

దేవుణ్ణి చూడడానికి భక్తి ఉండాలి. నువ్వు భక్తి అలవర్చుకో దేవుడు తప్పక కనిపిస్తాడు అన్నాడు భీమయ్య.

"నాకు భక్తి లేదు కాబట్టి దేవుడు లేడు. ఇంకెప్పుడూ దేవుడున్నాడని నాకు చెప్పకు. మనో తప్ప నేనదే నమ్మ ను. భక్తి లేకుండా దేవుడు కనబడతాడేమో చెప్పు. లేకపోతే ఉరుకో" అన్నాడు రామయ్య.

"భీమయ్య క్షణ అలాచెంది రామయ్యను కళ్ళు మూసుకోమన్నాడు. మూసుకోగానే భీమయ్య వాడిచెంప మేద లెంపకాయ కొట్టాడు.

"అయ్యో ఎంత దిబ్బ కొట్టావురా? చెంప ముడిపోతోంది" అంటూ రామ

"మూర్ఖుడా దాధ కనుడనురా" అన్నాడు రామయ్య

"మరీ నువ్వు కనుడనురా నన్ను నన్నావు కదా నీ ఇంట్లో నాకు ముచింద" అన్నాడు నన్నురాను" అన్నాడు భీమయ్య.

అంటే రామయ్య భీమయ్యను సాచి లెంపకాయ కొట్టాడు. అమ్మ ఇంటా భీమయ్య గావు కేక వెట్టాడు.

"దాధను ముచిందమన్నావుగా - ముచిందాను. దానిప్పుడు నువ్వు నన్ను రోలాలి. దేవుణ్ణి ముచిందమన్నాను. ముచిందలేకపోయావు. కాబట్టి దేవుడు లేడని బయటయింది" అమ్మ రామయ్య ఇక్కణ్ణిది వెళ్ళిపోయాడు.

అంతలో గావుకేకవీసి "ఇక్కడకు చేరిన జనం మీయం గెయిచుమి," నీకు లెక్కలేక, ఉంటే మాయం నానీ కుబ్బిని నన్నుంబాలని పుయ్యిందదం తెలివితప్పవ. అందుకు నీకు దగిన శాస్త్ర జరిగింది" అన్నారు. ఆ కథా ల భీమయ్య నానీ కుబ్బి జరికి వెళ్ళలేడు.

7. మీకు ఒక వాక్యము ఇర్శాదు వాక్యతో ఏమి చెప్పారు?

ఎ. ఇదిని మళ్ళీ చదువుతారు

బి. ప్రతి పదము యొక్క ఇర్శాదు తెలిసిపోయింది

సి. ఇది ఇర్శాదు వాక్యాలలో ఉన్న మీరగా వాక్యములను ఒక్క గ్రంథముగా

8. ఒక కథలో మొదటి రెండు వాక్యములు ప్రత్యేకం ఏమిటి?

ఎ. అన్న కూడా 'అనకమ్మ' లో మొదలవుతాయి

బి. అవి చాలా అసక్తిగా ఉంటాయి

సి. అవి కథ ఎలా ఉంటుందో చెప్పాయి

9. మీ దేవుడు మీమ్మ మీ ఒక కథ చదివి ఇది ఇర్శాదును గుర్తువెట్టుకొనమంటే మీరు ఏమి చెప్పారు?

ఎ. కథలోని ముఖ్యమైన వాటిని గుర్తు వేట్టుకొంటాను

బి. కథ మొత్తము చదివి ఇదిని గుర్తువెట్టుకొంటాను

సి. కథ చదివి ఇదిని పదములను దివి గుర్తువెట్టుకొంటాను

10. ఒక కథలో వేడిని ముఖ్యమైన వాక్యములుగా గుర్తించగలరు?

ఎ. ఏదైతే కథలోని వాటిని గుర్తించి ఎక్కువ చెప్పాయో వాటిని

బి. అసక్తిగా ఉన్న వాటిని

సి. అన్న ముఖ్యమైనవే

11. ఒక కథలోని లభి వాక్యములు ఎలా ప్రత్యేకంగా ఉంటాయి?

ఎ. అవి చాలా అసక్తి దారుకముగా ఉంటాయి

బి. కథ ఏమైందో అవి చెప్పాయి

సి. అవి కథ ఎంత కష్టమో తెలుపుతాయి

12. నువ్వు ఇర్రులులో ఏమి చదివేవో చెప్పి 'ఏమని చెప్పావు'?

ఎ. కథలో ఏమైందో చెప్పావు

బి. ఆ పుస్తకములో ఉన్న పేజీల సంఖ్య

సి. కథలో ఉన్న పాత్రలు

13. మీరు ఏదైనా కొందరగా చదవరలకుంటే మీరు ఏ పదములను చదువుతారు?

ఎ. కొత్త మాటలు

బి. మీరు లేలికగా చదవకలిగినవి

సి. కథ గురించి చెప్పేవి

14. మేము ఏదైన గ్రంథాలను చదివినా వాటిని అర్థం చేసుకోవడం కష్టం. మేము నివేదిక చదివినా అర్థం చేసుకోవడం కష్టం. ఏమి చేయాలి?
- సి. మేము అర్థం చేసుకోవడానికి ప్రయత్నించాలి.
- సి. మీరు అర్థం చేసుకోవడానికి ప్రయత్నించండి.
15. మేము ఏదైన పద్యమును చదివినా అర్థం చేసుకోవడం కష్టం. ఏమి చేయాలి?
- ఎ. కథ వల్లనని ఎక్కువ చదువు చదువు.
- బి. ఎవరితోనైనా ఇతరులను చదివినా అర్థం చేసుకోవడానికి ప్రయత్నించండి.
- సి. ప్రతి వాక్యమును అర్థం చేసుకోండి.
16. మేము చదివేటప్పుడు కథలని పద్యములని వదిలివేయాలి.
- ఎ. కష్టమైన పద్యములు.
- బి. అనవసరమైన వాటిని, కథలు చదివేటప్పుడు వదిలివేయాలి.
- సి. అసలు చదివిన వదిలివేయాలి.
17. ఏదైనా చదివేటప్పుడు మేము ఏమి అర్థం చేసుకోవడానికి ప్రయత్నించాలి?
- ఎ. కష్టమైన పద్యములు.
- బి. కథ అర్థము కానప్పుడు.
- సి. అసలు ఏమి కష్టము కాదు.
18. మేము ఏదైన కథ సరదా కోసం చదువుతుంటే మేము ఏమి చేసాలి?
- ఎ. అర్థము కోసం చివ్వు అను చూపుము.
- బి. కథ వల్లనంత తురగా చదువుట.
- సి. కథ ఒక సినిమాగా ఉపయోగించుట.
19. ఏదైనా చదివేటప్పుడు మేము ఏమి అర్థం చేసుకోవడానికి ప్రయత్నించాలి?
- ఎ. అసలు ఏమి అర్థం చేసుకోవడానికి ప్రయత్నించాలి.
- బి. ఒక సరియైన చివ్వు చూపుము.
- సి. కథ ఒక సినిమాగా ఉపయోగించుట.
20. మేము ఇతరుల కంటే ఏమి అర్థం చేసుకోవడానికి ప్రయత్నించాలి?
- ఎ. తేలికగా ఉన్న పుస్తకములు.
- బి. ఇది వరకే చదివిన ఉన్న కథలు.
- సి. బాగా చివ్వులు ఉన్న పుస్తకములు.

శ్లోకము

ప్రశ్న పరిశోధనము

వేటూరి ప్రభాకరశాస్త్రి

వేటూరి ప్రభాకరశాస్త్రిగారు గొప్ప భాషా పరిశోధకులు, విమర్శకులు, విద్యా కవులు, బహుభాషా కవియు, యోగివశంతులు, నిరాకంఠులు, నినయసంపన్నులు.

1. ఈ పాతము యెందు వేరేటి?
- జ. ఈ పాతము యెందు వేరు శకుంపరిగణము.
2. ఈ పాత్యాంశమును ఎవరు వ్రాశారు?
- జ. ఈ పాత్యాంశమును వేటూరి ప్రభాకరశాస్త్రిగారు వ్రాసారు.
3. వేటూరి ప్రభాకరశాస్త్రి గారి పాండిత్యాన్ని ఎలా వర్ణించారు?
- జ. వేటూరి ప్రభాకరశాస్త్రి గారు గొప్ప భాషా పరిశోధకులు, విమర్శకులు, నిరాకంఠులు కవులు అనేక భాషాపండితులుగా వర్ణించారు.
4. ఈ పాత్యాంశాన్ని ఎలా వర్ణించారు?
- జ. ఇతను నింజంబరుడు, యోగివశంతులు, నినయసంపన్నులని వర్ణించారు.

శాస్త్రిగారు క్రొ.శ. 1855 ఫిబ్రవరి 7న నేటినాడు కృష్ణానదు ఒడ్డున ఉన్న వెద్దు కళ్ళవల్లి గ్రామంలో జన్మించారు. చువ్వూరి రాజరాజుగారి కన్య సులక్ష్మమ్మను పెద్దవల్లి సోమనాథ శాస్త్రిగారి వద్ద కావ్య నాటకాలందరి సహితము పెండ్లి చేశారు. దేశస్థిత్వ వేంకటశాస్త్రిగారికి శిష్యులయ్యారు. ఇవధానాలు వేశారు. మద్రాసు కలెక్షన్ ప్లాన్ బుక్ లలో, మద్రాసు ప్రాచ్యరిశిత పుస్తక భాండాగారంలో, నువ్వాసు రాజధాని కళాశాలలో పండితునిగా, శిరుహిల్స్ శ్రీ వేంకటేశ్వర ప్రాచ్య కళాశాలలో ఆంధ్ర శాఖకు అధ్యక్షునిగా శ్రీ వేంకటేశ్వర ప్రాచ్య పరిశోధన సంస్థలో రీడరుగా పనిచేశారు.

1. శాస్త్రిగారు ఎన్నడ పుట్టారు?
- జ. శాస్త్రిగారు క్రొ.శ. 1855 ఫిబ్రవరి 7 ననేటినాడు పుట్టారు.
2. శాస్త్రిగారు ఎన్నడ పుట్టారు?
- జ. శాస్త్రిగారు కృష్ణానదు ఒడ్డున ఉన్న వెద్దు కళ్ళవల్లి గ్రామంలో జన్మించారు.
3. ఆయన సంస్కృతాన్ని ఎవరి వద్ద నేర్చుకున్నారు?
- జ. ఆయన సంస్కృతాన్ని చువ్వూరి రాజరాజుగారి వద్ద నేర్చుకున్నారు.
4. కావ్య నాటకాలలో సహితము పెండ్లి వద్ద నేర్చుకున్నారు.
- జ. కావ్య నాటకాలలో సహితము పెండ్లి సోమనాథశాస్త్రిగారి వద్ద నేర్చుకున్నారు.
5. ఆయన ఎవరికి శిష్యులయ్యారు?
- జ. ఆయన దేశస్థిత్వ వేంకటశాస్త్రిగారికి శిష్యులయ్యారు.
6. ఆయన దేశస్థిత్వ వేంకటశాస్త్రిగారి వద్ద ఏం నేర్చుకున్నారు?
- జ. ఆయన దేశస్థిత్వ వేంకటశాస్త్రిగారి వద్ద ఇవధానాలు నేర్చుకున్నారు.
7. ఆయన ఎన్నడ చదువుకున్నారు?
- జ. ఆయన నువ్వాసులో కలెక్షన్ ప్లాన్ బుక్ లలో చదువు కున్నారు.
8. ఆయన నువ్వాసులో ఎన్నడ పనిచేశారు?
- జ. ఆయన నువ్వాసులో ప్రాచ్యరిశిత పుస్తక భాండాగారంలో నువ్వాసు రాజధాని కళాశాలలో పండితునిగా పనిచేశారు.
9. ఆయన శిరుహిల్స్ లో ఎన్నడ పని చేశారు?
- జ. ఆయన శిరుహిల్స్ లో శ్రీ వేంకటేశ్వర ప్రాచ్య కళాశాలలో ఆంధ్ర శాఖకు అధ్యక్షునిగాను, శ్రీ వేంకటేశ్వర ప్రాచ్య పరిశోధన సంస్థలో రీడరుగా పనిచేశారు.

శాస్త్రిగారు పద్య గ్రంథాలను వ్రాసారు. నేతి నీసి, కడమరేపి, కపోతకథ, విశ్వాసము, ప్రాణిమానానందము, కర్మభూమి, శ్రుంగార శ్రీనాథము, కనకాభిషేకము, తంజావూరు అంధ్రరాజులు చరిత్రము, బాణవనమునుజరిగి, పృథ్వీరథావళి, తెలుగుమొగులు, పేదపక్షికలు, ప్రజ్ఞాప్రభువరము అనేది వారి కర్మభూమి అంటే చతురరాజులు, క్రీడాభిరామము, రంగనాథరామాయణం, హరివీలాసం, అన్నమచార్య శ్రీకర్మభూమి అంటే నీతి గ్రంథాలను పరిష్కరించి వాటికి అమూల్యవైన వేరికలు రచించారు. కొమరాయి, కందుకూరి, గిడుగు, గురజాడ, మానపల్లి, మల్లంపల్లి వంటి మహానుభావులు శాస్త్రిగారికి సన్నిహితులు.

1. శాస్త్రిగారు వ్రాసిన బాణి గ్రంథాలు వేర్వేరు వ్రాయుము?
 - జ. శాస్త్రిగారు వ్రాసిన బాణి గ్రంథాలవేనగా - నేతినిసి, కడమరేపి, కపోతకథ, విశ్వాసము, ప్రాణిమానానందము, కర్మభూమి, శ్రుంగార శ్రీనాథము, కనకాభిషేకము, తంజావూరు అంధ్రరాజులు చరిత్రము, బాణవనమునుజరిగి, పృథ్వీరథావళి, తెలుగు మొగులు, పేదపక్షికలు, ప్రజ్ఞాప్రభువరము, పృథ్వీరథము.
2. అతను ఏ గ్రంథాలను పరిష్కరించి వేరికలు వ్రాశాడు?
 - జ. అతను చతురరాజులు, క్రీడాభిరామము, రంగనాథరామాయణం, హరివీలాసం, అన్నమచార్య శ్రీకర్మభూమి పరిష్కరించి వేరికలు వ్రాశారు.
3. పరిష్కరించి వేరికలు వ్రాసేముడని అంటే ఏమిటి?
 - జ. పరిష్కరించి వేరికలు వ్రాయుడని అంటే విశ్లేషించి తాత్పర్యము ఇవ్వడము.
4. శాస్త్రిగారి సన్నిహితులు ఎవరు?
 - జ. శాస్త్రిగారి సన్నిహితులు కొమరాయి, కందుకూరి, గిడుగు, గురజాడ, మానపల్లి, మల్లంపల్లి రాళ్ళపల్లి వంటివారు.

ప్రజ్ఞాప్రభావము అనే గ్రంథము శాస్త్రిగారి స్వయంరీత్యం. వారి నిశ్చితాభిప్రాయాలు, దివాన్మహాశయులు, ప్రవృత్తులు, ఈ గ్రంథంలో వెల్లడింపబడ్డాయి. ప్రస్తుత పాఠ్యభాగం శకున పరిగణనము ఈ గ్రంథంలోనే శకునాలను చూడడం వ్యర్థమనే అభిప్రాయాన్ని ఈ పాఠం స్పష్టం చేస్తుంది.

1. శాస్త్రిగారి స్వయంరీత్యం వ్రాసిన గ్రంథం ఏదేమిటి?

జ. ప్రజ్ఞాప్రభావము.

2. ఈ గ్రంథంలో ఏం వెల్లడించారు?

జ. ఈ గ్రంథంలో శాస్త్రిగారు శకున నిశ్చితాభిప్రాయాలు, దివాన్మహాశయులు, ప్రవృత్తులు వెల్లడించారు.

3. ఈ శకున పరిగణనము ఏ గ్రంథంలోనీడి?

జ. ఈ శకున పరిగణనము అనే పాఠ్యభాగం ప్రజ్ఞాప్రభావము అనే అతని స్వయంరీత్యంలోనీడి.

4. ఈ పాఠ్యభాగంలో శకునాలను వెలిబుచ్చిన అభిప్రాయం ఏమిటి?

జ. ఈ పాఠ్యభాగంలో శకునాలను చూడడం వ్యర్థమనే అభిప్రాయాన్ని స్పష్టం చేశారు.

అట్లాన నీరొక్క ముడుకే అణచుకుని నిద్రియ్యడం శవు తలపులు సింహారీయన్నది. వెద్ద వెద్దలు, కొమ్ములు చిరిగిన పిదాంసులు, మహాస్వేత పదవులందున్నవారు కూడ సింహనుండి ఏదేని పని మీద బయటికి వెడలునప్పుడెవరూగా అవ్వరు వచ్చుచున్నారో అని పరిశీలింతురు. కుగ్రామములో నట్టి పరిశీలన తగునేమో, అర్థవంతమగుదేమో చాచినట్లు పృథులు గలనగరములలో నట్టి పరిశీలనము చికాకుకొల్పును. సమకాలముననే దేశములో పంచస్థంబ పండా శుభ్రస్థులున్నట్లు కలసికట్టుగానో, ముందు వెనుకలుగానో సభ్యులు వంటి బ్రాహ్మణులు, సోదరు బ్రాహ్మణులు లాశిల్లుచునే యుండురు. ఇందు పాఠ్యాల పూర్వ పర్యాయము పర్యావృత్తింపవలయును. మరియను సలాని విశంతువు, సలాని బ్రాహ్మణుడు ఎదురైన నద్విత్యము కారణము నిర్వక్తమగా నిర్వహణము చెందునో, వారు విశ్వసిండు శక్తు శాస్త్రమున కవనాదముగా విశ్వసిండుటకలదు. వారట్లు వద్దినప్పుడు మంచి జడుగులకేవల కారణములు, యుక్తులు నసంపర్కముగాను పాఠశుభ్రగా గణించుట కలదు.

1. దేశమంతటా ఎవరంటి తలపులు సింహారీయన్నది?

జ. దేశమంతటా అపభ్రంశపు తలపులు సింహారీయన్నది.

2. ఎందువలన ఇట్టి అపభ్రంశపు తలపులు సింహారీయన్నది?

జ. అట్లానము వలన ఇట్టి అపభ్రంశపు తలపులు సింహారీయన్నది.

3. వెద్ద వెద్దలు కొమ్ములు చిరిగిన పిదాంసులు, గొప్పపదవులలో వున్నవారు ఇంటినుండి ఏదేని పని మీద బయటికి వెడలునప్పుడు ఏమి చూస్తారు?

జ. వెద్ద వెద్దకొమ్ములు చిరిగిన పిదాంసులు గొప్పపదవులలో వున్నవారు ఇంటినుండి ఏదేని పనిమీద బయటికి వెడలునప్పుడు ఎవరు ఎవరు ఎదురు వచ్చుచున్నారో అని చూస్తారు.

4. ఎవరెవరు ఇంటినుండి ఏదేని పనిమీద బయటికి వెడలునప్పుడు ఎవరు వచ్చుచున్నారో అని పరిశీలిస్తారు?

జ. వెద్దవెద్దలు, కొమ్ములు చిరిగిన పిదాంసులు, మహాస్వేత పదవులలో ఉన్నవారు కూడ ఇంటినుండి ఏదేని పనిమీద బయటికి వెడలునప్పుడు ఎవరు వచ్చుచున్నారో అని పరిశీలింతురు.

5. ఇట్టిపరిశీలన అనగా నేమి?

జ. ఇట్టిపరిశీలన అనగా ఏదేని పనిమీద బయటికి వెడలునప్పుడు ఎవరు వచ్చుచున్నారో అని పరిశీలించ

6. ఇట్టిపరిశీలన ఎవ్వరికి తగును?

జ. ఇట్టిపరిశీలన కుగ్రామములలో ఉన్నవారికి తగును.

7. ఇట్టి పరిశీలన ఎవ్వరికి అర్థవంతమగునా?

జ. ఇట్టి పరిశీలన కుగ్రామములలో అర్థవంతమగును.

8. కుగ్రామములలో ఏది అర్థవంతము, తగును?

జ. కుగ్రామములలో బయటికి వెడలునప్పుడు ఎవరు వచ్చుచున్నారో అని చూడడం అర్థవంతము, తగును.

9. ఎందువలన ఈ పరిశీలన కుగ్రామములోనే వారికి తగను?
- జ. కుగ్రామములో తక్కువ సుండి ప్రజలు వుండటాచే ఇట్టి పరిశీలన తగను.
10. ఇట్టి పరిశీలన ఎక్కడ డికాకు గొల్పును.
- జ. ఇట్టి పరిశీలన నగరములో డికాకు గొల్పును.
11. ఇట్టి పరిశీలన ఎందువలన నగరములో డికాకు గొల్పును?
- జ. నగరములో వేలకంటే ఎక్కువ ప్రజలు కాబట్టి డికాకు గొల్పును.
12. పంచశభన్, పంచాశభమ్ అంటే ఏమిటి?
- జ. యిదు శుభములు, యిదు అశుభములు అని భర్తము.
13. నగరములో మనము ఒయ్యుదేరే సమయానికి ఎట్లు శారసిల్లదురు? ఎదురుపడుతూ వుంటారు?
- జ. నగరములో మనము ఒయ్యుదేరే సమయానికి వేధులలో కలసికట్టుగానో, ముందువెనుకలుగానో, సభర్తకలు, అభర్తకలు, ఇంటి బ్రాహ్మణులు, పలుకురు బ్రాహ్మణులు శారసిల్లుదునో యుండుదురు.
14. ఇట్లు సభర్తకలు, అభర్తకలు, ఇంటి బ్రాహ్మణులు, పలుకురు బ్రాహ్మణులు శారసిల్లుడాన్ని రహయి దేనితో పోల్చారు?
- జ. ఇట్లు సభర్తకలు, అభర్తకలు, ఇంటి బ్రాహ్మణులు, పలుకురు బ్రాహ్మణులు శారసిల్లుడాన్ని రహయి పంచశభన్, పంచాశభమ్ తో పోల్చుదు.
15. ఎందువల్ల వీరు శారసిల్లుడాన్ని పంచశభన్, పంచాశభమ్ తో పోల్చారు?
- జ. పంచాశభమ్ అంటే యిదు శుభాలు. సభర్తకలు, పలుకురు బ్రాహ్మణులు శారసిల్లితే శుభం జరుగుతుందనే సమ్మతం. అలా వరుసగా వేరువస్తే అన్ని శుభాలే జరగాలి. అలాగే అభర్తకలు అంటే భర్తలేనివారు సిగ్గువారి. ఇంటి బ్రాహ్మణులు ఎదురువస్తే అశుభాలు జరుగుతుందనే నమ్మకం. అలా వరుసగా వేరువస్తే అన్నీ అశుభాలే జరగాలి. అలాగాక భర్త ఉన్నవారు, భర్త లేనివారు, ఇంటి బ్రాహ్మణులు, పలుకురు బ్రాహ్మణులు కలసివస్తే శుభాలు, అశుభాలు అశుభాలు కలిసి జరగాలి భర్తం.
16. దేనితో పోలిక వర్ణములు అలాచిస్తారు?
- జ. ఈ శకునాలను చూడడంలో పోలిక వర్ణములు వుండువెనుక ఈ అలాచిస్తారు.
17. శకున శాస్త్రానికి అవసరంగా దేనిని విశ్లేషిస్తారు?
- జ. ఫలాని విశంకువు, ఫలాని బ్రాహ్మణుడు ఎదురుగా వచ్చినప్పుడు కార్యము సిరిసిక్రమముగా ప్రకృము ప్రకృగా నిర్వహించెందుననే జరుగువని అనుకోవడం శకునశాస్త్రానికి అవసరంగా భావిస్తారు.
18. విశంకువుగాని, ఇంటి బ్రాహ్మణుడు గాని ఎదురు వచ్చినప్పుడు ముందే జరగాలంటే వారేంభావీస్తారు?

మన మంచి చెడ్డలకు మహా ప్రవర్తనలవనీ, మన సత్కార్య సత్సంకల్ప బలముచే మన మంచిని మనమే సాధించుకొన గల్గుదుము. ఈ సత్యమును పట్టుదలతో వర్తిండు శాస్త్రి చిలిపి చీకాకులుకు పాల్పడరు. మంచి శక్తులమును ఎన్నింటికీ దుష్ప్రయోగములు గలవనుండుట, దుష్కృత నములు కెన్నింటికీ సత్ప్రయోగములు గల్గుట గుర్తించుమును గూడ శాస్త్రము ప్రమాణమని ప్రామాణ్య నిశ్చయము లేకున్నను దానినే విశ్వసించుచుండ వలెనని దానినేనో శ్లోకములు దాహించుచు సమర్థించుకొను చుండుట యజ్ఞానపు పిరికితనమున వలదా? గర్భవతులు గ్రహములు జూడరుచుట, ఆదివారము నాడు సింహ పద్మడి తినరాదనుట, రాత్రులందు లవణము వేరు ఉప్పును కలెగు వేరే వేర్వేరురాదును లవణము - బుట్టులాసిది - చెప్పరానిది శిశువు విశ్వము దెలుప వచ్చునుగ మొదలయిన విశ్వాసే.

1. మన మంచి చెడ్డలు దేని వేరు భారపడుతుంది?

జ. మన మంచి చెడ్డలు మన ప్రవర్తన వేరు భారపడుతుంది.

2. మన మంచిని ఎలా సాధించుకో గల్గుదుము?

జ. మన మంచిని మన సత్కార్య సత్సంకల్ప బలముచే సాధించుకొన గల్గుదుము.

3. ఎవరు చిలిపి చీకాకులుకు పాల్పడరు?

జ. మన మంచి చెడ్డలకు మనమే ప్రవర్తనలవనీ, మన సత్కార్య సత్సంకల్ప బలముచే మనమే సాధించుకొన గల్గుదుము అనే సత్యమును గ్రహిస్తే పట్టుదలతో వర్తిండువారు ఇట్టి చిలిపి చీకాకులుకు పాల్పడరు.

4. చిలిపి చీకాకులుకు పాల్పడరు?

జ. శక్తులము చూసి పనిచేయునా చీకాకులుకు పాల్పడరు.

5. అజ్ఞానపు పిరికితనము అని దేని నంటారు?

జ. మంచి శక్తులమును ఎన్నింటికీ దుష్ప్రయోగములు గలవను చుండుట దుష్కృతలముకు ఎన్నింటికీ సత్ప్రయోగములు గల్గుట గుర్తించినా చూడ, శాస్త్రము ప్రమాణమని తగిన ఆధారము లేకున్నను ప్రామాణ్య నిశ్చయము లేకున్నను దానినే విశ్వసించుచు, నమ్ముచు ఏవో శ్లోకములు ఉదాహరణ నిష్ఠి సమర్థించుకొనుట అద్భుత పిరికితన మంటారు.

6. శక్తులములు చూసేవారు, చూసే కొన్ని శక్తులములు గురించి వ్యాయము?

జ. శక్తులములు చూసేవారు, గర్భవతులు గ్రహములను జూడరాదని, ఆదివారమునాడు పిరికి పద్మడి తినరాదని, రాత్రులందు ఉప్పు వేరు చెప్పరాదని మొదలయినవి.

7. ఉప్పును రాత్రులందు ఏవని చెప్పాలంటారు?

జ. ఉప్పును రాత్రులందు లవణము అ బుట్టులాసిది - చెప్పరానిది అనే నిధములుగా చెప్పారు.

మన తలపట్టిన పనులను, పనులను మన దేశమున చెనవేయకొని సాగుచున్నది. చెడుగు
 ణి యందు నుండితనము పాఠశాల నిర్మించు చున్నది. జన్మము లెన్నగా నెన్నగా సత్త్వము పొంది కేశ్యను
 పొందించుకొని నేత్యను పొందించుకొని పాఠశాలను కలెక్టరు పనులు పడగా బుగారుకు వన్నె పొందినట్లు
 మానప్రసిద్ధి పొందుచున్నది. సద్భావ ప్రాబల్యము కలిగినప్పుడు ప్రపంచము నాలగంచుల ప్రజా సంపదము
 నెల్ల పాఠశాల గర్హిస్తయును దేశ జాతి కులశ్రయములయిన నిరర్థకాచారములు తొలగిపోగలవు.

1. మంచి దేశములు ఎక్కడ నున్నాయి?
2. మంచి దేశములు మన దేశములో, పాఠశాలలో ననుభవించుచున్నాయి.
3. మంచి దేశములు ఎలా పుట్టినాయి?
4. మంచి దేశములు చెనవేయకొని వున్నాయి.
5. మానప్రసిద్ధి ఇంకను ఏది దొరగలేదు?
6. మానప్రసిద్ధి దేశములలో యందు నుండితనము ఇంకను దొరగలేదు.
7. మానప్రసిద్ధి ఏది వెరగజొచ్చెను?
8. జన్మము లెన్నగా నెన్నగా సత్త్వము కి మంచి కేశ్యను కెడును తొలగించుకొని, నేత్యను
 కినునిసి కి వెంపొందించుకొనగలెనన్న కిన్మది పోయిపోయిన లేక వెండుపోయిన కిన్మ మానప్రసిద్ధి
 వెరగజొచ్చెను.
9. ఈ కిన్మలు ఎలా వెరగజొచ్చెను?
10. పుట్టుములు పడగా పడగా బుగారుకు వన్నె పొందినట్లు వెరగజొచ్చెను.
11. పుట్టుములు పడగా పడగా ఇంకో ఏమిటి?
12. బుగారున్ని కాలముగా కాలముగా ఇది అర్థము.
13. ఈ సామెతని మానప్రసిద్ధి మంచితనము కిన్మలో ఎందుకు పోయింది?
14. బుగారు ఎలాగయితే కాలముగా కాలముగా వన్నె వెరగుచుందో మానప్రసిద్ధి కూడ జన్మ లెన్నగా ఎన్నగా
 మంచితనము చెనవేయకొని ఇది అర్థము.
15. సద్భావ ప్రాబల్యము కలిగినప్పుడు ఏమి తొలగిపోయింది?
16. సద్భావ ప్రాబల్యము కలిగినప్పుడు దేశజాతి కులశ్రయములయిన నిరర్థకాచారము తొలగిపోవును.
17. దేశజాతి కులశ్రయములు సద్భావన కలిగినప్పుడు ఎందుకు తొలగిపోయింది?
18. సద్భావన ప్రాబల్యము కలిగినప్పుడు ప్రపంచము నాలగంచుల ప్రజా సంపదమునెల్ల పాఠశాలకు
 కిమాపడానికి దేశ జాతి కులశ్రయములయిన నిరర్థకాచారములు తొలగిపోయి.
19. వై విషయం ఎవరు చెప్పారు?
20. వై విషయం రచయిత చెప్పారు.
21. రచయిత ప్రకారము నిరర్థకాచారములు ఏవి?
22. రచయిత ప్రకారము దేశజాతి కులశ్రయములు నిరర్థకాచారములు.

పాఠ్యము

భూమధ్య రేఖ ప్యాంత్ర శీతోష్ణస్థితి

భూమధ్య రేఖ ప్యాంత్ర శీతోష్ణస్థితిని ఉష్ణమండల వర్షపాతపు ఆరణ్యములు లేక సతతవారిత ఆరణ్యములు లేక నెలలు లేక అమావాస్య రకపు శీతోష్ణస్థితి అని అంటారు.

ప్రతి ఉనికి, విస్తృతి

ఈ ప్యాంత్రము భూమధ్య రేఖ కిరున్నపుల 10° ఉత్తర అక్షాంశము నుండి 10° దక్షిణ అక్షాంశము వరకు ఒక దీర్ఘరేఖ వ్యాపించియున్నది. ఈ రకపు శీతోష్ణస్థితి ఉన్న ప్యాంత్రాలు ఇవి.

దక్షిణ అమెరికా - మొజాంబిక్ పరేవాచుస్య చేతము

ఆఫ్రికా - కాంగో పరేవాచుస్య చేతము, గినియాబిసము

ఆసియా - మలెషియా, ఇండోనేషియా, న్యూగినియా, ఫిలిప్పైన్స్ లో భాగములు.

1. భూమధ్య రేఖ ప్యాంత్ర శీతోష్ణస్థితి ఏ ఏ వర్షాశోపిలుస్తారు?

జ.

2. భూమధ్య రేఖ శీతోష్ణస్థితి ఎంత వరకు వ్యాపించియున్నది?

జ.

3. ఈ రకపు శీతోష్ణస్థితి దక్షిణ అమెరికాలో ఎక్కడ వున్నది?

జ.

4. ఆఫ్రికాలో ఏ ప్యాంత్రంలో వుంది?

జ.

5. ఆసియాలో ఏ ప్యాంత్రంలో భూమధ్య రేఖ ప్యాంత్ర శీతోష్ణస్థితి వున్నది?

ప్రాంత శాస్త్రము

చి: ప్రశ్నోత్తరము

ఈ ప్రాంతము భూముధ్య రేఖకు దగ్గరలో ఉండడం వల్ల సంవత్సరము పొడవున అధిక ఉష్ణోగ్రత 25° నుండి 30° నికే కలిగివుంటుంది. నేనది శీతాకాలపు ఉష్ణోగ్రతల భేదము వాల తక్కువ అనగా 5° నెం. గే కన్న తక్కువగా వుంటుంది. ముఖ్యము నడినెత్తివైపు కాకిందులవే సంవత్సర సగటు ఉష్ణోగ్రత ఇంచుమించు 26° నెం.గే. ఉంటుంది. రాత్తులు చల్లగా వుంటాయి. ఇందువలన కొందరు ఈ రాత్తులను ఉష్ణమండలపు శీతాకాలము అని అంటారు.

1. భూముధ్య రేఖ ప్రాంతంలో సంవత్సరం పొడవున ఎంత ఉష్ణోగ్రత ఉంటుంది?

జ:

2. భూముధ్య రేఖ ప్రాంతంలో సంవత్సరం పొడవున అధిక ఉష్ణోగ్రత ఎందుకు ఉంటుంది?

జ:

3. భూముధ్య రేఖ ప్రాంతంలో నేనది, శీతాకాలపు ఉష్ణోగ్రతలో భేదం ఎంత వుంటుంది?

జ:

4. ఈ ప్రాంతంలో సగటు ఉష్ణోగ్రత ఇంచుమించు 26° నెం.గే. ఉండటానికి కారణమేమిటి?

జ:

5. ఈ ప్రాంతంలో రాత్తులను ఉష్ణమండలపు శీతాకాలము అని ఎందుకు వేరు?

జ:

సాంఘిక శాస్త్రము.

ఈ ప్రదేశము ఎక్కడ ఉన్నదో గ్రహించుకొని వ్రాయండి. కాబట్టి నేరు ఎక్కడగా ఆదిరి అవుతు ఉంటుంది. ఈ వేడిగాలి తేలికై వెళ్లి పోతు ఉంటుంది. ఇది సంవత్సరము పొడవున, ఇదట సంవత్సర వర్షమును కలుగజేస్తుంది. ఇక్కడ సంవత్సర సగటు వర్షపాతము 160 - 350 సెం.మీ వర్షంలో ఉంటుంది. వర్షపాతము స్థానికంగా చూచు సమయములందు కలుగుతుంది. ఇదట వర్షము ఈదురు గాలులతోను ఉరుములతోను కూడి ఉంటుంది. ఇదట వర్షపాతము సూర్యుని వెంబడిస్తుంది. అందుచే రెండు గరిష్ఠ పరిమితులుంటాయి. ఇదట వివిధ కాలములు క్రిముతువు లు లేవు.

1. ఈ ప్రాంతంలో ఎక్కడ ఉన్నదో గ్రహించుకొని వ్రాయండి?

2. ఈ ప్రాంతంలో సంవత్సర వర్షాలు ఎలా కలుగుతుంది?

3. ఈ ప్రాంతంలో సంవత్సర సగటు వర్షపాతము ఎంత?

4. ఈ ప్రాంతంలో వర్షపాతము స్థానికంగా ఎప్పుడు కలుగుతుంది?

5. ఈ ప్రాంతపు వర్షాలు ఎలా వుంటాయి?

6. ఇదట రెండు గరిష్ఠ పరిమితులు ఎందుకుంటుంది?

7. రెండు గరిష్ఠ పరిమితులు అంటే ఏమిటి?

8. ఈ ప్రాంతంలో ఋతువులు వుంటాయా?

9. ఈ ప్రాంతంలో ఋతువులు ఎందుకు వుండవు?

సాంఘికశాస్త్రము

సె. సహజస్వభావము - జంతువులు

ఈ ప్రాంతంలో జీవించే వివిధ పక్షి వర్గాలైన పక్షిపక్షము ఉండడం వలన వృక్షజాలము చాలా దట్టముగా వెరుగుతుంది. ఈ వృక్ష [చెట్ల]లో ప్రపంచములోకెల్లా అతి దట్టమైన అరణ్యాలు కనిపిస్తాయి. ఇలా వెరిగే కేకారణాలు గాని చెరుగులు కూడ తగ్గింది వేస్తాయి. అందుచే సూర్యకాంతి కొరకు ఇక్కడి చెట్లు ఎత్తుల వల్ల పోలి పర్వదునుచి. ఈ కారణంగా అవి చాలా ఎత్తుకు వెరుగుతాయి. నీటికి మొదళ్ళ దీవర దీప్తిని కొద్దిపాటి కొమ్మలు ముగ్ధము ఉంటాయి. ఈ చెట్లు ఇంద్రమిందు గాదును కొంతగా ఉంటాయి. ఈ వృక్షాలలో అనేక రకాల చెట్లు ఉన్నాయి. అమెజాన్ అడవులలో రుబరు, కాంగో అడవులలో మొహాని నల్ల పిరుగుడు చేపల్ల చెట్లు సామాన్యంగా కనిపిస్తాయి. ఈ చెట్లను చుట్టుకొని అనేక పక్షులు వెరుగుతాయి. క్రింద ఉన్న భూమి కుళ్ళువన్న అకాలలో కొమ్మల పానీ వలె కప్పబడి ఉంటుంది. క్రింద చెట్లమైన ముఖాలు, గడ్డి దట్టంగా వెరుగుతాయి.

1. ఈ ప్రాంతంలో వృక్షజాలము ఎలా వుంటుంది?
2. ఈ ప్రాంతంలో వృక్షాలను దట్టంగా వుండటానికి కారణమేమి?
3. ప్రపంచంలోకెల్లా అతి దట్టమైన అరణ్యాలు ఎక్కడ కనిపిస్తాయి?
4. దట్టమైన కేకారణాలు వలన ఏం తగ్గుతుంది?
5. ఇక్కడి చెట్లలో దీనికి పోలి పర్వదునుచి?
6. ఇక్కడి చెట్లలో సూర్యకాంతి కొరకు ఎందుకు పోలి పర్వదునుచి?
7. ఈ పోలి వలన చెట్లు ఎలా వెరుగుతాయి?
8. నీటికి మొదళ్ళ దీవర ఎలా వుంటాయి?
9. ఈ చెట్లు ఏ ప్రాంతంలో ఉంటాయి?
10. అమెజాన్, కాంగో అడవులలో సాధారణంగా కనిపించే చెట్లు ఏవి?
11. ఈ చెట్లను చుట్టుకొని ఏం వెరుగుతుంది?
12. ఈ చెట్లక్రింద వున్న భూమి ఎలా వుంటుంది?
13. ఈ చెట్లు క్రింద ఏం వెరుగుతాయి?

సాక్షిత్ శాస్త్రము

ఈ చెట్ల కలహ వా గర్జన వృంతుండి. ఆకులు వెడల్పుగా ఉంటాయి. మొహగసి, ఎబాసి, రోజేప్రడీ, నింకోనా, రుతు ఈ అడవులలో సాధారణంగా కనబడే వృక్షజాతులు. క్రింద సూర్యకాంతి ఈ అరణ్యాలలో లేక పోవడం వల్ల చెట్ల కొమ్మల మీద ఉండగలిగే జంతుజాలం మాత్రం ఇప్పుట వుంది. నేలమీద నివసించే జంతువులు చాలా కొద్ది. కొత్తులు, చింపాంజీలు, పురుగులు, గడ్డిలాలు, చెట్లమీదనుండే శాంపలు, ఎగిరే ఉడుకలు మొదలైనవి ఈ అరణ్యాలలో ఎక్కువగా వుంటాయి. వేటిలో చాలా జంతువులు చెట్లమీద నిరుగునూ, నివసిస్తూ వాటి జీవితంలో క్రింద ఉన్న భూమిని చేరనేరవు. బురద నేలలోను వర్షపునీరు చాలేళ్లు, మొరళ్లు అనేకరకములైన పాములు నినసిస్తూ ఉంటాయి. ఆఫ్రికాలో నేటి గుర్రము } } ౧౦ ఎక్కువ. ఈ అడవులను చీల్చుకొని పోయే ఏనుగులవంటి బలమైన జంతువులు మాడ ఈ అడవులలో నివసిస్తున్నాయి. అనేక రకముల ఈగలు, దోమలు, పురుగులు కూడ ఈ అడవులలో అపరిమితంగా వున్నాయి. ఇవి రక్తము త్రాగే స్వభావము. కలవీగాను రోగాలను వ్యాప్తి చేసేవిగాను కూడ వుంటాయి. పక్షులు, పురుగులు రంగు రంగులలో కనిపిస్తాయి.

1. అరణ్యాలలో వెరిగే చెట్ల కలహ, ఆకులు ఎలా వుంటాయి?
2. భూమధ్య రేఖా ప్రాంతంలో సాధారణంగా కనబడే వృక్షజాతులు ఏవి?
3. ఈ ప్రాంతంలో ఎటువంటి జంతుజాలం ఉంటుంది?
4. ఎందువల్ల చెట్లకొమ్మల మీద వుండే జంతుజాలం మాత్రం వుంటుంది?
5. ఈ అరణ్యాలలో నేల మీద నివసించే జంతువులు ఏవి?
6. ఇక్కడ చాలా జంతువులు ఎలా నివసిస్తాయి?
7. బురదనేలలోను, నేలలోను ఏమి వుంటాయి?
8. ఆఫ్రికాలో ఏ జంతువు ఎక్కువగా కనబడుతుంది?
9. ఈ అడవులలో నివసించే బలమైన జంతువే?
10. ఈ జంతువులు కాద ఈ అరణ్యాలలో ఇంకేం వుంటుంది?
11. ఈ పురుగులు స్వభావమేమిటి?
12. ఇక్కడ పక్షులు, పురుగులు ఎలా కనిపిస్తాయి?

సాంఘిక శాస్త్రము

ప్రజలు - దీనిత పిదానము

ఎక్కువ వేడి, చెమ్మ ఈ ప్రాంతాలలో ఉండడంతో ఇది మానవ నివాసమునకు అనుకూలంగా లేదు. ఎందువల్ల ఈ ప్రాంతాలలో జన సాంద్రత చాలా తక్కువ. జన సంఖ్య తీరప్రాంతాలలోను, నదీ వ్యవస్థలలోను కేంద్రీకృతమై ఉంది. కాంగో, అమిజాన్ పరివాహ ప్రదేశములలో కన్న ఇండోనేషియాలో జన సంఖ్య తక్కువ.

1. భూచక్రం లేదా ప్రాంతము మానవ నివాసానికి ఎందుకు అనుకూలంగా లేదు?
2. ఈ ప్రాంతంలో జనసాంద్రత ఎందుకు తక్కువ?
3. ఈ ప్రాంతంలో జనసంఖ్య ఎక్కడ ఎక్కువగా కేంద్రీకృతమై ఉంటుంది?
4. ఎక్కడ ఏ ప్రాంతంలో జనసంఖ్య ఎక్కువ?
5. ఏ ప్రాంతంలో జనసంఖ్య ఇండోనేషియాలో కన్న తక్కువ?

సాంఘిక శాస్త్రము

ఇక్కడి పృజలు కురుమగా ఉంటారు. కాంగ్రేషరేవాహ పృదేశంలోనీ, ఆడవులలో నివసించేవారిని పిగ్గీలు అంటారు. వేరు చాల పోట్టిగా ఉంటారు. చిన్న చిన్న గుంపులుగా నివశిస్తారు. వేరికి శాశ్వతమైన నివాసస్థలాలు లేవు. ఆడవులలో భాళిలన్న ప్లాంట్లలో అర్థనంద్యాకారంగా ఉండే గుడిసెలలో నివసిస్తున్నారు. వారి ముఖవృత్తి వేడి. వేరు నూనెగింజలు, పండ్లు కూడ పోగు చేస్తారు. ఆడవి జంతువులను వేరు అతి సులుభంగా పట్టుకుంటారు. వారు శరీరబాధనకషయోగించే వస్త్రములు చాల చిన్నవి. పిల్లు పిషము ప్రాసిన బాణములు, ఉండే కొమ్ములు, వేరు సాధారణంగా ఉపయోగించు అయుధాలు.

1. ఇక్కడ పృజలు ఎలా వుంటారు?
2. కాంగ్రేషరేవాహ పృదేశంలోనీ ఆడవులలో నివసించేవారిని పిగ్గులుంటారు?
3. పిగ్గీలు ఎలా వుంటారు?
4. పిగ్గీలు ఎలా నివశిస్తారు?
5. పిగ్గీలకు శాశ్వతమైన నివాసస్థలాలు వున్నాయా?
6. వేరు గుడిసెలు ఎక్కడ వేసుకుంటారు?
7. వేరి గుడిసెలు ఎలా వుంటాయి?
8. వేరి ముఖ వృత్తి ఏది?
9. వేరికాక వేరు ఇంకేం పోగు చేస్తారు?
10. ఆడవి జంతువులను వేరు ఎలా పట్టుకుంటారు?
11. వేరు శరీరబాధనకు శీఘ్రమవుతే వాడే వస్త్రము ఎలా వుంటుంది?
12. వేరు సాధారణంగా వాడే అయుధాలు ఏవి?

సాంఘిక శాస్త్రము

ఆగ్నేయ దిశలోని భారతదేశములకు అనుగుణముగా. మహాభారతమునందు, బర్హియో లాని పాణ్డే హంతురే : సుమత్యాలాని కాబాజాతి వారు : పిగ్గేల జీవితమును గడుపువారే. ఇదమలాలాని భాగ్యలములలో వేరు స్థలమును పాతి వానిష్ట పశుల తమ గుడినెలను గడ్డితో కప్పించినవి నిర్మించుకుంటారు. వేరిలో కొంతమంది పాడు వ్యవసాయము చేసి వడ్డు ఇతర పంటలు పండిస్తున్నారు. ఒకచోట ఉన్న భూమిలోని సారము తమమే పోషించుదురు ఇంకా భాగ్యలములలోని సారము వ్యవసాయము ప్రారంభిస్తారు. పాణ్డే హంతురే, సుమత్యాలాని, కాబాజాతి, బర్హియో మొదలైన వానిని కూడ వేరు నేకరిస్తారు.

1. ఆగ్నేయ దిశలోని భారతదేశములలో నివసించేవారు ఎలా వుంటారు?
2. పిగ్గేల జీవితం వంటి జీవితం గడిచేవారు ఇంకెక్కడ వున్నారు?
3. వేరు తమ గుడినెలను ఎక్కడ నిర్మించుకుంటారు?
4. వేరు తమ గుడినెలను దీనిలో నిర్మించుకుంటారు?
5. వేరిలో కొంతమంది పాడువంటి వ్యవసాయము చేస్తారు?
6. వేరు పాడు వ్యవసాయములో ఏమి పండిస్తారు?
7. ఒక చోట భూమిలోని సారము అన్ని పోయినప్పుడు, వ్యవసాయమునుపుడం వారే చేస్తారు?
8. వేరు ఏ ఏ వస్తువులను నేకరిస్తారు?

ప్రాంగిక శాస్త్రము

ఈ "నాగరికులు వారి పరిసరముల కారణంగా అనాగరికంగానే ఉండిపోయారు. ఈ ప్రాంతము లలో మూసవలదు పుణ్యము బాగు కరువ. ఇంతేగాక మురియూ, ఎల్లోజ్జరము నల్లని పాతలుతో పద్మరామేశ్వరలో కట్టిన జ్వరము స్థలింగ్ నికొనెన్కో నరముల బలహీనముల్ని నిద్రమత్తును కలిగించి రోగిని వ ప్రవాడికి వంచి వాధులు ఈ ప్రాంతము వేరు పొందింది. ఈ శతృష్టస్థితిలో రోగివాష్టి కలిగించు పురుగులు, సూక్ష్మ జీవులు పిస్తూరంగా వృద్ధిచెందుతాయి. ఈ ప్రాంతముల అనాగరికులు ప్రపంచం నుండి ఏ సంపదములు లేకుండా ఉన్నారు. ఆమెజాన్ పరివాహక దేశంలో నివసించే వారికి అమెజాన్ నది ఉపకరణాల వ్యయములను.

1. ఈ ప్రాంతము వారు అనాగరికంగా ఉండటానికి కారణమేమి?
2. ఈ ప్రాంతం మూసవలదు ఏం కరువ?
3. ఈ ప్రాంతం వారికి ఎటువంటి వాధలు ఉన్నాయి?
4. ఈ శతృష్టస్థితిలో ఏది ఎక్కువ వృద్ధి పొందుతుంది?
5. ఈ ప్రాంతంలో అనాగరికులు ఎలా ప్రస్తారు?
6. అమెజాన్ పరివాహక దేశంలో నివసించేవారికి రవాణా, వ్యయాల మార్గమేమి?

పాఠ్య శాస్త్రము

అమెజాన్ పరేవాచా పృథ్వీమయో రక్షయతు ఏకే గువేస్తారు. కాంగో పరేవాచా పృథ్వీమయలలో దంతములు, కన్నుల వేరి న్నోగు. ఇగ్నోయూలో తటలను వెంచుకున్నారు. భూమధ్య రేఖాస్రాంతపు అడవులలోనే కలప దళ విలక్షణము. ఇట్టి విలక్షణ వాటిలో మొహోగని, ఎబోని, రోజ్ వుడ్, ముఖ్య మైనవి. రక్షయ, కలప, వాల్ వంగి వాటిని అమెజాన్ పరేవాచా పృథ్వీమయ జన్మ స్థానము. వృద్ధ మునకు పసివీవము బావదములు ఇక్కడ నిశ్చారంగా దొరుకుతాయి. ఘనా, న్నెజ్జీరియా, ఇవరీరము

కాచెరూన్, పశ్చిమ ఆఫ్రికా దేశాలు కోకో ఉత్పత్తిలో పృథ్వీమయలో అగ్ర స్థానము వహిస్తున్నాయి. దేశాలకు కోకో పండ్ల మారకద్రవ్యం ఎక్కువగా లభిస్తుంది. పృథ్వీమయ రబ్బరు ఉత్పత్తిలో 90 శాతంకు పైగా ముజింబీ, ఇండోనేషియాలో ఉత్పత్తి అవుతోంది. కాంగో పరేవాచా పృథ్వీమయలో తగిలిన గరము, చురుము, గనులున్నాయి. ముజింబీ తగరమును ఉత్పత్తి చేయుటలో పృథ్వీమయ స్థానం వహిస్తోంది. గినియాలో బాక్సైట్ ఉత్పత్తి చేస్తున్నారు. జావా, సుమత్రా బోర్నియోలో వెబ్బీరియు గనులున్నాయి.

1. అమెజాన్ పరేవాచా పృథ్వీమయలో ఏం ఏకే గువేస్తారు?
2. కాంగో పరేవాచా పృథ్వీమయలో ఏం నేకరిస్తారు?
3. ఇగ్నోయూలో ఏం వెంచుతారు?
4. భూమధ్య రేఖా స్రాంతపు అడవుల కలప ఎటువంటిది?
5. ఇట్టి విలక్షణ కలపలో ముఖ్యమైనవి ఏవి?
6. వేటిని అమెజాన్ పరేవాచా పృథ్వీమయ జన్మ స్థానము?
7. ఇక్కడ ఇంకేం ఎక్కువగా దొరుకుతుంది?
8. కోకో ఉత్పత్తిలో ఏ ఏ పృథ్వీమయ పృథ్వీమయలో అగ్ర స్థానము వహిస్తున్నాయి?
9. ఘనా, న్నెజ్జీరియా, ఇవరీరము, కాచెరూన్, పశ్చిమ ఆఫ్రికా దేశాలకు కోకో వల్ల ఏం లభిస్తుంది?
10. పృథ్వీమయ రబ్బరు ఉత్పత్తిలో 90 శాతానికి పైగా ఎక్కడ ఉత్పత్తి అవుతోంది?
11. కాంగో పరేవాచా పృథ్వీమయలో ఏ గనులున్నాయి?
12. ముజింబీ ఏ ఉత్పత్తిలో పృథ్వీమయ స్థానాన్ని వహిస్తోంది?
13. గినియాలో ఏ ఉత్పత్తి చేస్తారు?
14. వెబ్బీరియు గనులు ఎక్కడ వున్నాయి?

సాంఘిక శాస్త్రము

మొదట, కాంగ్రెస్ సర్వేయర్ల పరీక్షలు జనపదాలు పాల తక్కువ. మానోసే, బేలేరేన్ అను మొదటి సర్వేయర్ల పరీక్షలు కాంగ్రెస్ సర్వేయర్ల అనునది అరణ్య ఉత్పత్తులను నేకరించినట్టి, వరిపిళ్ల వేలములను, ముఖ్యమైన పంటలు కేంద్రంగా ఉంది. అగ్రేయసియలో కొన్ని ముఖ్యమైన పంటలున్నాయి. సింగపూర్ వరకు పంటలు నాకాశ్రయము. ముఖ్యమైన యెగు, రబ్బరు, తగరము ఎగుమతులు ఈ రేవు గుండా సాగుచున్నాయి. ప్యాశు, ప్యాశుల నాకా వర్తక మార్గాలకు ఇది కూడలి. ముఖ్యమైన ముఖ్య పంటలు కలెలంపూర్. ఈ పంటల ఆంతర్జాతీయంగా ఈ ప్యాముఖ్యత పొందింది ఇండోనేషియాకు ముఖ్య పంటల ఒకటి. ఇది నాకాశ్రయము కూడ. దీని ద్వారా కాఫీ, రబ్బరు ఎగుమతి అవుతుంటాయి.

1. పంటల జనపదాలు ఎక్కడ ఉన్నాయి?
2. మొదటి సర్వేయర్ల పరీక్షలు నీ వర్తక కేంద్రాలు ఏవి?
3. స్టేట్స్మెన్ట్ అనునది ఏమిటి?
4. అగ్రేయసియలో ఎన్ని ముఖ్య పంటలున్నాయి?
5. సింగపూర్ దేనికి ప్యాముఖ్యము?
6. సింగపూర్ రేవు గుండా ఏమి ఎగుమతులు అవుతాయి?
7. ఈ రబ్బరు, తగరము ఎక్కడ నుండి కేసుకొస్తారు?
8. ఈ సింగపూర్ నాకాశ్రయము దేనికి కూడలి?
9. ముఖ్యమైన ముఖ్య పంటలేమిటి?
10. కలెలంపూర్ ఏ విధంగా ప్యాముఖ్యత పొందింది?
11. ఇండోనేషియా ముఖ్య పంటలేమిటి?
12. ఒకర్నాలో ఏముంది?
13. ఒకర్నా నాకాశ్రయము ద్వారా ఏం ఎగుమతి అవుతుంది?

F

1950

[illegible]

మనమును సమీక్షించి కనుగొనగలము. పరిశ్రమ జేసి పాపమును దూరము చేయు.

• గాఢం! కృష్ణ చిహ్నం?

5. చరణాశక్తి వ్యయము క్రద్ధ ముపేక్ష.

• దిగు సమాజం యొక్క సామితి పృథివ్యక్షిప్తి శన పరిసరా సునింది ఇందులోని పృథ్వీ

కర్నూలు గుడిపిండి తన చుట్టూ వున్న మొక్కలు, జంతువుల గుడిపిండి సరికొనిన జ్వరం వలన

1. తెలుగు సమాజంలో కనానకులకు కను సరికట్టా జ్ఞానము ఎందుకు అవసరం.

१. धर्मशास्त्रम्.

1. పప్పుబెల్ల కిక్కిరిస్తూ పాతాళంలోకి పడిపోయి సర్పములతో కల సృలభం కొరకు పరిసరాలను ఉపయోగించడం మానక పురుషులతో పుట్టి కుండ నాగరిక ప్రారంభమైంది. మన కిష్టమైన నాగరిక శిల్పాలను మానవ శక్తితో వేయడం పరిసరాలను తెలిపిగా ఇళ్లను చేసుకొనవలసిన అవసరం ఇది వర్తమానా లేనందున.

1. నాగరిక పప్పుడు ప్రారంభమైంది ?

- జ. కిక్కిరిస్తూ ఉపయోగించడం, పసిపప్పులను పాతాళంలోకి పంపిస్తూ పరిసరాలను ఉపయోగించి నప్పుడే నాగరిక ప్రారంభమైంది.

2. నాగరికన శిల్పాలలో ముఖ్యమైనవి ఏవైనవి ?

- జ. పరిసరాలను తెలిపిగా ఇళ్లను చేసుకోవటం.

3. ఏం అవసరం అదివరకూ లేనంత ఇప్పుడు వున్నది ?

- జ. పరిసరాలను ఇళ్లను చేసుకోవటం అవసరం ఇది వరకూ లేనంత ఇప్పుడు వున్నది.

4. ఎందుకంటే ?

- జ. ఇప్పుడు ఇళ్లకు బాగానలన వ్యక్తి వనరుల సరిగ్గా ఉండడం వలన పరిసరాలను ఇళ్లకు చేసుకోవటం అవసరం పున్నదం ఎక్కడ వుంది.

ప్రస్తుత సమయంలో పరిసరాలను సరియైన విధానంలో ఉపయోగించుకోవడం మానవని యొక్క అతి ముఖ్యమైన బాధ్యత. కలుషితాలను బాగా సమస్యలు పరిసరాలకు సంబంధించినవే.

1. ప్రస్తుత సమయంలో మానవని అతి ముఖ్య బాధ్యత ఏది ?

- జ. ప్రస్తుత సమయంలో మానవని అతిముఖ్యమైన బాధ్యత పరిసరాలను సరి అయిన విధంగా ఉపయోగించడం.

2. మానవనికి తట్టుకోలేని సమస్యలు దేనికి సంబంధించినవి ?

- జ. మానవనికి తట్టుకోలేని సమస్యలు పరిసరాలకు సంబంధించినవే.

మానవుడు బాధాభిన్నుడై, ఎన్నడూ కాలనిన అనాదికి, కాలుష్యాల వల్ల కలుగు ప్రమాదాలకు వ్యర్థమైతేనే ప్రకృతి కనకం ఉపయోగినికి, మానవుడు పరిష్కారమార్గాలను కనుగొనవలసి గుర్తుంది. లాభదాయకమైన ద్వైవిధ భోజన శైలి మానవుడు సరిపెరుమాన్నను పరిరక్షించాలన్నను పరిసరాలను మార్పుగల మానవుడై, బాధ్యత కల్గిన జీవజాలం అవుతుంది.

1. మానవుడు బాధాభిన్నుడై, ఎన్నడూ కాలనిన అనాదికి కాలుష్యాల వల్ల కలుగు ప్రమాదాలకు వ్యర్థమైతేనే ప్రకృతి కనకం ఉపయోగినికి, మానవుడు పరిష్కారమార్గాలను కనుగొనవలసి గుర్తుంది.

జ. బాధాభిన్నుడై, ఎన్నడూ కాలనిన అనాదికి కాలుష్యాల వల్ల కలుగు ప్రమాదాలకు వ్యర్థమైతేనే ప్రకృతి కనకం ఉపయోగినికి, మానవుడు పరిష్కారమార్గాలను కనుగొనవలసి గుర్తుంది.

2. పరిసరాలను పరిరక్షించాలని దేనిని బాగా చక్క చూడాలి?

జ. మానవశక్తి

3. ఎందుకొకటి?

జ. మానవశక్తి పరిసరాలను మార్పుగలదు కాబట్టి.

4. మానవుల శక్తి ఎటువంటిది?

జ. పరిసరాలను మార్పుగలదు.

మనమీదవర కూడా పరిసరాలకు మనము కలుగజేయు హాని గురించి పట్టించుకోలేదు. శ్రద్ధ మాపలేదు. మొత్తం సమాజం తన బాధ్యతను తెలుసుకున్నప్పుడే పరిసరాలకు సంబంధించిన సమస్యలను పరిష్కార మార్గాలను కనుగొనే అవకాశం లభిస్తుంది. అందుకొక మనం పరిసరాల గురించి లేదా జీవావరణ శాస్త్రమును అధ్యయనము చేయువలసిన అవసరం ఎంతో వుంది.

1. మనం ఇంతవరకు దేన్ని గురించి పట్టించుకోలేదు?

జ. పరిసరాలకు మనం కలుగ జేసే హాని గురించి పట్టించుకోలేదు.

2. పరిసరాలకు సంబంధించిన సమస్యల పరిష్కారము కనుక్కోనే అవకాశం ఎప్పుడు ఉంటుంది ?

జ. మొత్తం సమాజం తన బాధ్యతను తెలుసుకున్నప్పుడు పరిసరాలకు సంబంధించిన సమస్యల పరిష్కారం కనుక్కోనే అవకాశం వుంటుంది.

3. మొత్తం సమాజం బాధ్యత తెలుసుకోవాలంటే ఏం చేయాలి?

జ. మొత్తం సమాజం బాధ్యత తెలుసుకోవాలంటే జీవావరణ శాస్త్రము చదవవలసింది.

姓名 学号 性别

የግንባታ ሥራ ላይ

- భారత గుర్తింపు పోషకాహారము.

4. వరదల వల్లగా ఎంతో నష్టము జరుగినది.

5. పూర్వంలో ఏమి ఇమిడి వుంటి?

5. పృథ్వీలో ఏమిటి ఇమిడి వుంది?
జు: భూభాగంలోనే, పోనీ గానీ నీడనిందే ఎలాంటి జనాభా సజ్జా సమాజం పృథ్వీలో ఇమిడివుంది.

ఈ సమావేశము, సిక్స్త్ పరిసరాలు రెండు కలిసి ఒక ఆవరణ వసస్థానా క్రి

[illegible]

నిదరించే భూభాగాన్ని మృత్తిక, నీరు, గాలి వీటితో సహజోపచరణము అంటాము.

1. ఇవరణ వశ వస్థలో ఏవి కలిసి పనిచేస్తాయి?
- జ. జీవనమాజము, నిర్జీవ పరిసరాలు రెండూ కలిసి పని చేస్తాయి.
2. పృథ్విని శాస్త్రీయంగా ఏమనకొచ్చు?
- జ. పృథ్విని శాస్త్రీయంగా ఇవరణ వశ వస్థ అని అనుకోవచ్చు.
3. పృథ్విని ఎందుకు ఇవరణ వశ వస్థ అని అనుకోవచ్చు?
- జ. ఎందుకంటే పృథ్విలో జీవనిర్జీవ సంబంధమైన పరిసరాలు ఉన్నాయి.
4. పూము నివసించే భూభాగాన్ని ఏమంటారు?
- జ. పూము నివసించే భూభాగాన్ని ఘట్టిక, నీరు, గాలి వేడితో సహజీవావరణ అంటారు.

1. పృథ్వీలో నిర్మాణమునకు, స్వయంభూతమయిన ప్రమాణాన్ని ఆచరణ వ్యవస్థ అంటారు.
ఇందులో కేవల
అవధిని, సజ్జను, సజ్జను } సమాజము చేరివుంటాయి.
2. ఆచరణ వ్యవస్థ చాలా విశిష్టంగా ఉంది?
జ. పృథ్వీలోని నిర్మాణమునకు, స్వయంభూతమయిన ప్రమాణాన్ని ఆచరణ వ్యవస్థ అంటారు.
3. ఇందులో ఏమి వుంటాయి?
జ. ఇందులో అజ్ఞాన, అపరాధము, సహసమాజము చేరి వుంటాయి.
2. ఏ ప్రదేశంలోని దేవతలను నిర్మాణ వ్యాపారాలు నిర్వహించే పరిసరాల ప్రభావంతో ఆధారపడి ఉంటాయి.
మృత్తిక, నీరు, గాలి మొదలగు పదార్థాలు ఆచరణ వ్యవస్థలోని నిర్వహణ యొక్క నిధి ఆధారంగా ఉంటాయి.
దీనితో కలిపి, అజ్ఞాన, అపరాధము, సహసమాజము చేరి, పృథ్వీలోని ప్రభావము, ప్రభావము, నీరు, జన్మ, పౌష్టిక, సౌఖ్యం,
ఇతర విషయాలు ఉంటాయి. ఇందులకు మృత్తిక పరిసరాలలోని ఒక అంశము లేక భూసంబంధ
ప్రభావము | ఉన్నట్లుగా తెలుసుకుంటే వారికి శ్రీకృష్ణానికి కారకాలు అజ్ఞాన
వ్యవస్థలోని ఇతర అంశాలు.
1. దేవతలను నిర్మాణ వ్యాపారాలు చేసివై ఆధారపడి ఉంటాయి ?
జ. దేవతలను నిర్మాణ వ్యాపారాలు నిర్వహించే పరిసరాల ప్రభావంతో ఆధారపడి వుంటాయి.
2. ఆచరణ వ్యవస్థలో నిర్వహణ భాగానికి ఆధారంగా వుండేవి ఏవి?
జ. ఆచరణ వ్యవస్థలో మృత్తిక, నీరు, గాలి మొదలగు పదార్థాలు నిర్వహణభాగానికి ఆధారంగా వుంటాయి.
3. మృత్తిక, నీరు, గాలి మొదలగు పదార్థాలలో ఏమివుంటాయి?
జ. మృత్తిక, నీరు, గాలి మొదలగు పదార్థాలలో కలిగిన అకలిగిన అంశాలుగా నీరు, బొగ్గుపులుసు వాయువు
ప్రభావము, నీరు, జన్మ, పౌష్టిక, ఇతర విషయాలు వుంటాయి.
4. అజ్ఞాన వ్యవస్థలోని ఇతర అంశాలు ఏవి?
జ. మృత్తిక పరిసరాలలోని ఒక అంశములేక భూసంబంధ ప్రభావము |
ఉన్నట్లుగా తెలుసుకుంటే వారికి శ్రీకృష్ణానికి కారకాలు అజ్ఞాన వ్యవస్థలోని ఇతర అంశాలు.

సజీవసమాజములో ముఖ్యమైనది ఏమిటి? సజీవసమాజములో మొదట ముఖ్యమైనది ఏమిటి? ఇది
 స్వయంగా ఆలోచించినప్పుడు కనిపించును. సిండి పదార్థాలు, మానకృతులు
 మొదలైనవి. ఇవి సజీవసమాజము వాళ్ళనే-కె-కె-కె-కె, నేరు ఖనిజ పోషకాలు నుండి
 ఆహారాన్ని తయారు చేసుకొంటున్నాయి. ఇది స్వయంపోషకాలు. | అందుకు
 ఉత్పత్తిదారు! | ఇది అంటారు. ఇందున్నదికి ఇవి శక్తిని ఉత్పత్తి చేయవు
 కాని శక్తిని ఒక రూపము నుండి మరొక రూపానికి మారుస్తాయి.

సజీవసమాజములో ముఖ్యమైనది ఏమిటి?

సజీవసమాజములో పర్యవేక్షణ మొదలు | ఇది సమాజము గల మొదలు | ముఖ్యమైనది.

పర్యవేక్షణ మొదలు ఏకైకంగా ఆహారాన్ని తయారు చేసుకుంటాయి?

స్వయంగా ఆహారాన్ని తయారు చేసుకుంటాయి.

ఏ ఏ ఆహారాన్ని తయారు చేసుకుంటాయి?

పిండి పదార్థాలు, మానకృతులు మొదలగునవి తయారు చేసుకుంటాయి.

ఆహారాన్ని తయారు చేసుకోవడానికి కావలసిన పోషకాలే?

తరళ కర్మన పదార్థాలైన వాల్చన్ - కె-కె-కె-కె, నేరు ఖనిజపోషకాలు ఆహార పదార్థాలు తయారు

చేసుకోవడానికి కావలసిన పోషకాలు.

ఆహారాన్ని తయారు చేసుకోవడానికి కావలసిన పోషకాలను ఏయింటారు?

ఆహారాన్ని తయారు చేసుకోవడానికి కావలసిన పోషకాలను స్వయం పోషకాలు.

అంటారు.

స్వయంపోషకాలు మరొక పేరేమి?

స్వయంపోషకాలను సాధారణంగా ఉత్పత్తిదారులు అంటారు.

స్వయంపోషకాలు శక్తిని ఉత్పత్తి చేస్తాయా?

స్వయంపోషకాలు శక్తిని ఉత్పత్తి చేయవు.

స్వయం పోషకాలు శక్తిని ఏం చేస్తుంది?

స్వయంపోషకాలు శక్తిని ఒక రూపం నుండి మరొక రూపానికి మారుస్తాయి.

L. పాపములు మన్నింపుడు నీవు ప్రభువైనవి నీవు

అందుకే ఈ సందర్భంగా మనస్సును పరమార్థానుభవమునకు గాని, శరీరమునకు లేదు.

అందుచేతనే ఈ సమావేశం జరిగింది. ఇది సమావేశంగా జరిగిందేమిట? మానవసేవ

[illegible]

దేవుని శ్రీ సత్యంబును ప్రకటించుచు : శ్రీ మాన దంబలము, వేదిసి పూరికా

ఈ కథ : : చివర : చివర : ఇవీ ప్రశ్నిన కథన పదార్థాలనుండి (

సోమవారమునకు, సోమవారమునకు గుర్రము వాసుల రాక్షసులము కుక్క గొడుగులు

మరియు : కవి పదావళిలు.

1. పశువులకు వాడని మందులను కుక్కలకు వేయడంపై సేవసమాజాన్ని ఏమంటారు ?

జ. గోమత్య శాస్త్రము - గోమత్య శాస్త్రమును గురించి జ్ఞానమును పరమార్థము అని లేక వినియోగము అని

3 = 0.155

2. వ్యవస్థాపక కమిటీ ఏది?

జ. పరిపూర్ణ విశ్రాంతిని పొందగలగి మరల పనిని సమర్థవంతముగా చేయగలగి

3. పరస్పర కేవలమూలం లోలో రం కొరకు వేటిమీద ఆధారపడుతుంది?

జి. సర్వభక్త దేవనూజం హా గం కోసం ఉప్పు లిదారులువ్ అధారపడుతుంది.

4. ఉప్పుదారులు నిరసనాచారమే?

జ. ఉత్తర భాగము దీవనశూదము అతడొకటి అనునది మొదలు.

5. జీవసంబంధ యంత్రాల సురక్షిత జీవ సహజమే?

జ. పేదసంబంధ వ్యవస్థగల మూక రక కేవలమాజిము పిట్టెన్న కారులు

6. విడిచిన్న చా రూపు గల మూడ వేదము?

జ. విస్పిన్నకాయను ప్రాకాశం గుని అని కూడ అంటారు }

7. విడిచిన్న చాగులు ఎలా బ్రతుకుతాయి?

జ. సిద్ధిన్నచారలు కృష్ణ, కష్టించువా ర వదార్థాల నుండి అవ రం తయ్యంచుకొని ఖర్చుకు

7000.

3. పిచ్చిన్న చదువుకు ఉదాహరణలేవి?

జ. పిన్పిన్న కారులకు మూడు కేస్ ల్లో రిజ్ట్ బాజులు కనుగొనుము! మొదలయిన శిలేంద్రా లు !

5. నేలను, నీటిని పంటను బాల్కరియను విడిచి వారు జీవితమును గడపు పీఠియన సంఖ్యలో ఉండి ఈ ప్రాంతములకు క్రియాశీలక లేకపోయినట్లయితే వ్యవసాయ కృషిలు తెప్పలూ పడిన మృత శరీరాలు కుళ్ళి వలన కరువు పదార్థమును నిండి అసహ్యంగా పరిణమించి వుండేది.

1. బాల్కరియను ఎక్కడ వుంటుంది?

జ. బాల్కరియను నీలము, నీటిని వుంటుంది.

2. బాల్కరియను ఏవిధంగా పనిచేస్తుంది?

జ. బాల్కరియను విడిచి వారు పనిచేస్తుంది.

3. బాల్కరియను విడిచి వారు పనిచేయుట వలన మనకు విధంగా ఉపయోగపడుతుంది?

జ. బాల్కరియను విడిచి వారు పనిచేయుట వలన మృత శరీరాలు కుళ్ళి పోవుచున్నది.

4. ఈ బాల్కరియను క్రియాశీలక లేకపోయినట్లయితే విశ్వం ఎలా వుండేది?

జ. బాల్కరియను క్రియాశీలక లేకపోతే విశ్వమున కృషిలు తెప్పలూ పడిన మృత కళేబరాలను, కుళ్ళి పోవుచున్న కరువు పదార్థమును నిండి అసహ్యంగా పరిణమించి ఉండేది.

సజీవ సుఖము - ప్రాకృత పరిసరాలు

సజీవ నిర్భవ వ్యవస్థలను పాఠశాలము పాఠశాలము } సమయపాటుక
మొదలు మొదలు మొదలు మొదలు పాఠశాలము } పాఠశాలముగా ఉపయోగపడుతాయి.
మొదలు నేటికి ఉన్న పాఠశాలము పాఠశాలముగా నేల నుండి గ్రహిస్తాయి. ఆకుల ద్వారా వాతావరణం
నీల కాంతి-డె-ఆక్సిజనును గ్రహిస్తాయి. సూర్యరశ్మి నిరంతరము లభించే శక్తికి మూలము }
అటు సూర్యరశ్మిని పరివర్తించుచు, పిండి పదార్థాలను సంశ్లేషిస్తాయి. సజీవ వ్యవస్థలలో మూక
భాగమైన జంతువులు మొదలగు జంతువులు గాక కీటకములు, వీటిని శాకాహారము }
అందును, కొన్ని జంతువులు శాకాహారము కొరకు ఇతర జంతువులవై ఆధారపడ్డాయి. వాటిని
మాంసాహారము అంటారు.

1. సజీవ నిర్భవ వ్యవస్థలను పాఠశాలము పాఠశాలముగా ఉపయోగపడుతాయి ?
2. సజీవ నిర్భవ వ్యవస్థలను పాఠశాలము పాఠశాలముగా ఉపయోగపడుతాయి ?
3. మొదలు నేటికి ఉన్న పాఠశాలము పాఠశాలముగా ఉపయోగపడుతాయి ?
4. మొదలు నేటికి ఉన్న పాఠశాలము పాఠశాలముగా ఉపయోగపడుతాయి ?
5. మొదలు నేటికి, ఉన్న జంతువులను ఎలా గ్రహిస్తాయి ?
6. మొదలు నేటికి, ఉన్న జంతువులను ఎలా గ్రహిస్తాయి ?
7. నేరు, ఉన్న జంతువులు మొదలు లకి ఎక్కడ లభిస్తుంది ?
8. నేరు, ఉన్న జంతువులు మొదలు లకి భూమి నుండి లభిస్తుంది.
9. వాతావరణంలోని కాంతి-డె-ఆక్సిజనును ఎలా గ్రహిస్తుంది ?
10. అటువలె వాతావరణం లోని కాంతి-డె-ఆక్సిజనును గ్రహిస్తుంది.
11. దెట్లకు శక్తి ఎక్కడ నుండి లభిస్తుంది ?
12. దెట్లకు శక్తి సూర్యరశ్మి నుండి లభిస్తుంది.
13. అటు సూర్యరశ్మి లో దేనిని పరివర్తించుతుంది ?
14. అటు సూర్యరశ్మిని పరివర్తించుచు పిండి పదార్థాలు, మాంసకృత్తులు మొదలగు పదార్థాలను పరివర్తించుతుంది.
15. సజీవ వ్యవస్థలలోని మొదలు లకు, మూక భాగమే ?
16. సజీవ వ్యవస్థలలో మొదలు లకు, మూక భాగం జంతువులు.
17. మొదలు లను పాఠశాలముగా ఉపయోగపడుతాయి ?
18. మొదలు లను పాఠశాలముగా ఉపయోగపడుతాయి ?

ప్రతి ఒక్కరినీ పట్టించుకోవాలి.

[illegible]

1. పరభక్తాని చేసిని నంటారు?
2. పరభక్తాని జంతువుల నంటారు.
3. సంపదలన జంతువులను పరభక్తాలంటారు?
4. జంతువులన్ని చిహ్నం వారిదు మొదట లెక్కే ని, ఇతర జంతువులవైగాని ఆధారపడకుండి. సమయంగా తయారు చేసుకోవచ్చు. ఎందుకని విడివిడి పరభక్తాలు అంటారు.
5. విద్విన్నుకారులు శబ్దికి విశ్వస్థుండు?
6. విద్విన్నుకారులు దనిషోయున వ్యక్తిజంతు శరీరాలను విశ్వస్థుండు.
7. దనిషోయున వ్యక్తి జంతువులను విశ్వస్థిందడం వలన ఫలితము ఏమి?
8. దనిషోయున వ్యక్తి జంతువులను విశ్వస్థిందడం వలన కర్మన ఇకర్మన షడాల్లాలను మృత్తికకు భూమికి లేదా భౌతిక ఉచరానికిది కాదు. సిగ్గున నడవనైన దేరుకాయి.
9. కార్మన్-డ్కె-అక్సెప్ట్, నక్ర జని వాతాచరణంలో ఏ రూపంలో నిడుదల అవుతుంది?
10. కార్మన్-డ్కె-అక్సెప్ట్, నక్ర జని వాతాచరణంలో అమ్మోనియా రూపంలో నిడుదల అవుతుంది.
11. కార్మన్-డ్కె-అక్సెప్ట్, నక్ర జని, అమ్మోనియా రూపంలో వాతాచరణంలో నిడుదల అవడం వలన లాభమేమి?
12. కార్మన్-డ్కె-అక్సెప్ట్, నక్ర జని అమ్మోనియా రూపంలో వాతాచరణంలో నిడుదల అవడం వలన ఫినిజాలు అడవ వడవన నూడి నడవ వడవనలోకి తిరిగి పు వెళిస్తాయి.

ప్రతిభా: "మన గ్రామస్థుల ఎక్కువరియు కృష్ణామంజురలో వ్యవస్థకు నూదీ జడచేరబడి."

ఎక్స్ రియును నుగా ¹ ² ³ ⁴ ⁵ ⁶ ⁷ ⁸ ⁹ ¹⁰ ¹¹ ¹² ¹³ ¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ ¹⁹ ²⁰ ²¹ ²² ²³ ²⁴ ²⁵ ²⁶ ²⁷ ²⁸ ²⁹ ³⁰ ³¹ ³² ³³ ³⁴ ³⁵ ³⁶ ³⁷ ³⁸ ³⁹ ⁴⁰ ⁴¹ ⁴² ⁴³ ⁴⁴ ⁴⁵ ⁴⁶ ⁴⁷ ⁴⁸ ⁴⁹ ⁵⁰ ⁵¹ ⁵² ⁵³ ⁵⁴ ⁵⁵ ⁵⁶ ⁵⁷ ⁵⁸ ⁵⁹ ⁶⁰ ⁶¹ ⁶² ⁶³ ⁶⁴ ⁶⁵ ⁶⁶ ⁶⁷ ⁶⁸ ⁶⁹ ⁷⁰ ⁷¹ ⁷² ⁷³ ⁷⁴ ⁷⁵ ⁷⁶ ⁷⁷ ⁷⁸ ⁷⁹ ⁸⁰ ⁸¹ ⁸² ⁸³ ⁸⁴ ⁸⁵ ⁸⁶ ⁸⁷ ⁸⁸ ⁸⁹ ⁹⁰ ⁹¹ ⁹² ⁹³ ⁹⁴ ⁹⁵ ⁹⁶ ⁹⁷ ⁹⁸ ⁹⁹ ¹⁰⁰ ¹⁰¹ ¹⁰² ¹⁰³ ¹⁰⁴ ¹⁰⁵ ¹⁰⁶ ¹⁰⁷ ¹⁰⁸ ¹⁰⁹ ¹¹⁰ ¹¹¹ ¹¹² ¹¹³ ¹¹⁴ ¹¹⁵ ¹¹⁶ ¹¹⁷ ¹¹⁸ ¹¹⁹ ¹²⁰ ¹²¹ ¹²² ¹²³ ¹²⁴ ¹²⁵ ¹²⁶ ¹²⁷ ¹²⁸ ¹²⁹ ¹³⁰ ¹³¹ ¹³² ¹³³ ¹³⁴ ¹³⁵ ¹³⁶ ¹³⁷ ¹³⁸ ¹³⁹ ¹⁴⁰ ¹⁴¹ ¹⁴² ¹⁴³ ¹⁴⁴ ¹⁴⁵ ¹⁴⁶ ¹⁴⁷ ¹⁴⁸ ¹⁴⁹ ¹⁵⁰ ¹⁵¹ ¹⁵² ¹⁵³ ¹⁵⁴ ¹⁵⁵ ¹⁵⁶ ¹⁵⁷ ¹⁵⁸ ¹⁵⁹ ¹⁶⁰ ¹⁶¹ ¹⁶² ¹⁶³ ¹⁶⁴ ¹⁶⁵ ¹⁶⁶ ¹⁶⁷ ¹⁶⁸ ¹⁶⁹ ¹⁷⁰ ¹⁷¹ ¹⁷² ¹⁷³ ¹⁷⁴ ¹⁷⁵ ¹⁷⁶ ¹⁷⁷ ¹⁷⁸ ¹⁷⁹ ¹⁸⁰ ¹⁸¹ ¹⁸² ¹⁸³ ¹⁸⁴ ¹⁸⁵ ¹⁸⁶ ¹⁸⁷ ¹⁸⁸ ¹⁸⁹ ¹⁹⁰ ¹⁹¹ ¹⁹² ¹⁹³ ¹⁹⁴ ¹⁹⁵ ¹⁹⁶ ¹⁹⁷ ¹⁹⁸ ¹⁹⁹ ²⁰⁰ ²⁰¹ ²⁰² ²⁰³ ²⁰⁴ ²⁰⁵ ²⁰⁶ ²⁰⁷ ²⁰⁸ ²⁰⁹ ²¹⁰ ²¹¹ ²¹² ²¹³ ²¹⁴ ²¹⁵ ²¹⁶ ²¹⁷ ²¹⁸ ²¹⁹ ²²⁰ ²²¹ ²²² ²²³ ²²⁴ ²²⁵ ²²⁶ ²²⁷ ²²⁸ ²²⁹ ²³⁰ ²³¹ ²³² ²³³ ²³⁴ ²³⁵ ²³⁶ ²³⁷ ²³⁸ ²³⁹ ²⁴⁰ ²⁴¹ ²⁴² ²⁴³ ²⁴⁴ ²⁴⁵ ²⁴⁶ ²⁴⁷ ²⁴⁸ ²⁴⁹ ²⁵⁰ ²⁵¹ ²⁵² ²⁵³ ²⁵⁴ ²⁵⁵ ²⁵⁶ ²⁵⁷ ²⁵⁸ ²⁵⁹ ²⁶⁰ ²⁶¹ ²⁶² ²⁶³ ²⁶⁴ ²⁶⁵ ²⁶⁶ ²⁶⁷ ²⁶⁸ ²⁶⁹ ²⁷⁰ ²⁷¹ ²⁷² ²⁷³ ²⁷⁴ ²⁷⁵ ²⁷⁶ ²⁷⁷ ²⁷⁸ ²⁷⁹ ²⁸⁰ ²⁸¹ ²⁸² ²⁸³ ²⁸⁴ ²⁸⁵ ²⁸⁶ ²⁸⁷ ²⁸⁸ ²⁸⁹ ²⁹⁰ ²⁹¹ ²⁹² ²⁹³ ²⁹⁴ ²⁹⁵ ²⁹⁶ ²⁹⁷ ²⁹⁸ ²⁹⁹ ³⁰⁰ ³⁰¹ ³⁰² ³⁰³ ³⁰⁴ ³⁰⁵ ³⁰⁶ ³⁰⁷ ³⁰⁸ ³⁰⁹ ³¹⁰ ³¹¹ ³¹² ³¹³ ³¹⁴ ³¹⁵ ³¹⁶ ³¹⁷ ³¹⁸ ³¹⁹ ³²⁰ ³²¹ ³²² ³²³ ³²⁴ ³²⁵ ³²⁶ ³²⁷ ³²⁸ ³²⁹ ³³⁰ ³³¹ ³³² ³³³ ³³⁴ ³³⁵ ³³⁶ ³³⁷ ³³⁸ ³³⁹ ³⁴⁰ ³⁴¹ ³⁴² ³⁴³ ³⁴⁴ ³⁴⁵ ³⁴⁶ ³⁴⁷ ³⁴⁸ ³⁴⁹ ³⁵⁰ ³⁵¹ ³⁵² ³⁵³ ³⁵⁴ ³⁵⁵ ³⁵⁶ ³⁵⁷ ³⁵⁸ ³⁵⁹ ³⁶⁰ ³⁶¹ ³⁶² ³⁶³ ³⁶⁴ ³⁶⁵ ³⁶⁶ ³⁶⁷ ³⁶⁸ ³⁶⁹ ³⁷⁰ ³⁷¹ ³⁷² ³⁷³ ³⁷⁴ ³⁷⁵ ³⁷⁶ ³⁷⁷ ³⁷⁸ ³⁷⁹ ³⁸⁰ ³⁸¹ ³⁸² ³⁸³ ³⁸⁴ ³⁸⁵ ³⁸⁶ ³⁸⁷ ³⁸⁸ ³⁸⁹ ³⁹⁰ ³⁹¹ ³⁹² ³⁹³ ³⁹⁴ ³⁹⁵ ³⁹⁶ ³⁹⁷ ³⁹⁸ ³⁹⁹ ⁴⁰⁰ ⁴⁰¹ ⁴⁰² ⁴⁰³ ⁴⁰⁴ ⁴⁰⁵ ⁴⁰⁶ ⁴⁰⁷ ⁴⁰⁸ ⁴⁰⁹ ⁴¹⁰ ⁴¹¹ ⁴¹² ⁴¹³ ⁴¹⁴ ⁴¹⁵ ⁴¹⁶ ⁴¹⁷ ⁴¹⁸ ⁴¹⁹ ⁴²⁰ ⁴²¹ ⁴²² ⁴²³ ⁴²⁴ ⁴²⁵ ⁴²⁶ ⁴²⁷ ⁴²⁸ ⁴²⁹ ⁴³⁰ ⁴³¹ ⁴³² ⁴³³ ⁴³⁴ ⁴³⁵ ⁴³⁶ ⁴³⁷ ⁴³⁸ ⁴³⁹ ⁴⁴⁰ ⁴⁴¹ ⁴⁴² ⁴⁴³ ⁴⁴⁴ ⁴⁴⁵ ⁴⁴⁶ ⁴⁴⁷ ⁴⁴⁸ ⁴⁴⁹ ⁴⁵⁰ ⁴⁵¹ ⁴⁵² ⁴⁵³ ⁴⁵⁴ ⁴⁵⁵ ⁴⁵⁶ ⁴⁵⁷ ⁴⁵⁸ ⁴⁵⁹ ⁴⁶⁰ ⁴⁶¹ ⁴⁶² ⁴⁶³ ⁴⁶⁴ ⁴⁶⁵ ^{466</}

1. కృష్ణిమ అవరణ వ్యవస్థకు మంచి ఉదాహరణ?
- జ. కృష్ణిమ అవరణ వ్యవస్థకు ప్రయోగశాలలోని సమగ్రమైన ఎక్స్‌రియం మంచి ఉదాహరణ.
2. ఎక్స్‌రియం అంటే ఏమిటి?
- జ. ఎక్స్‌రియం అనగా క్రియాశీలదలను పరిరక్షించుటకు వేలగా విర్భవించిన గాఢత.
3. ఎక్స్‌రియం అడుగుగాన ఏమి వుంటుంది?
- జ. ఎక్స్‌రియం అడుగుగాన కనదులునుండి తెచ్చిన ఇసుక, ఇసుక పొర వుంటుంది. ఇందు గులక దాక్కు ? ? అవరణం జరుగుతుంది.
4. ఎక్స్‌రియంలో ఏ నేలినీ వేస్తారు?
- జ. ఎక్స్‌రియంలో చెయ్య నేలినీ వేసి వుండవలెను.

విశాఖపట్నం నుండి విజయవాడకు. ఎ.వి. రోడ్డు విశాఖ కేటెసి నుండి విజయవాడకు
 సుమారు 100 కి.మీ. దూరము. రైల్వే-డెక్-బ్రాడ్వే. నేతిలో కార్బన్-డెక్-బ్రాడ్వే.
 తమిళనాడు రాష్ట్రము నుండి విజయవాడకు.

ఏకైక దిగ్గుంటలో శివశివార్చన, పౌర్ణమి, నిరేటఫిల్లమ్మే ముద్రలు అక్షయము వీరిమొక్కలను
పంచుకొను.

పడి గ్రహించు.

శ్శేవలలు ఎలా వ్యవహరించుకొనును?

శ్శేవలలు వారిలో కలిగిన సుఖమును, బిల్వమునది లభించిన సంతోషమును
 ఉపయోగించుకొని వృద్ధి కలుగజేయుదురు.

శ్శేవలలును దేనితో వ్యవహరించును?

శ్శేవలలును అపవిత్ర దీక్ష వ్రాక్షాంతో వ్యవహరించును.

కర్మమును చేయుచున్నప్పుడు కర్మమును చేయుచున్నప్పుడు
 పదార్థమును విడిచి వేసి వేరుకాదు. ఈ విషయ పదార్థము వలన శ్మవలమును విడిచి వేరు
 కాదు. ఈ శ్మవలము చేసినప్పుడు మరొక పదార్థమును విడిచి వేరు
 చేయవలసి వచ్చినప్పుడు, ఉత్పత్తియగును. | అట్లేదేమని వినియోగింపబడును.
 కొంతకాలంగా ఉన్న ఎక్కడియును పదార్థమును పూరికాచు రు. | ఏర్పడుటయు.
 అవి సూక్ష్మమైన దేవులు చేసినట్లు కుక్క, ఎర్రని కర్మన పదార్థాల మీద లేదా చేసిన పదార్థాల
 మీద జేసిపోయి. ఈ పూరికాచు రును పరమేశ్వరాన్ని పుట్టితి ఈ అవరణ వ్యవస్థలో అవి కూడ ఒక భాగమే.
 ఎందువంటే విషయ పదార్థము వినియోగింపబడును. | అని కూడ పాల్గొంటాయి. ఈ విధంగా
 ఎక్కడియును, క్రియమును చేసిన అవరణ వ్యవస్థ అని తెలిసికొనవలెను. ఈ విధంగా జీవులను నిర్మించిన
 పరిసరాలను సూక్ష్మము సూక్ష్మములో పదార్థాల మార్పిడి జరుగుతుంది. ఇందువలన అవరణ వ్యవస్థ
 సూక్ష్మమునియున్నట్లు కనుగొను. | సూక్ష్మమును విషయము కూడ అవలంబించును.

1. కర్మన పదార్థము నేర్పించి ఎలా నమ్మండి?
- జ. చేయు, వాటి చేసిన క్రియనును జరుపుకొన్నప్పుడు కర్మన పదార్థము నేర్పించి విడుదల చేస్తాయి.
2. కర్మన పదార్థము నేర్పించి ఎలా వేరుకాదు?
- జ. కర్మన పదార్థము నేర్పించి విషయముగా వేరుకాదు.
3. ఈ విషయ పదార్థాల వలన ఉత్పత్తియగును?
- జ. ఈ విషయ పదార్థాలవలన శ్మవలము. ఈ రిజగతిని బాగాచెరుకుతాయి.
4. చేయకు అను రం ఏమిటి?
- జ. శ్మవలము చేయకు అను రం.
5. ఎక్కడియులో ఉత్పత్తియగును ఏమి?
- జ. ఎక్కడియులో శ్మవలము అనువును మొత్తము ఉత్పత్తియగును.
6. ఎక్కడియులో వినియోగింపబడును ఏమి?
- జ. ఎక్కడియులో వినియోగింపబడును చేయు.
7. కొంతకాలానికి ఎక్కడియు అడుగున ఏమి ఏర్పడుతుంది?
- జ. కొంతకాలానికి ఎక్కడియు అడుగున పూరికాచు రును ఏర్పడుతుంది.
8. పూరికాచు రును అంటే ఏమిటి?
- జ. పూరికాచు రును సూక్ష్మమైన దేవులు.

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కావ్యములు
కావ్యములు

എന്റെ കൈയ്ക്കു നീക്കം ചെയ്താൽ എന്തു ചെയ്യും? അതും എന്റെ കൈയ്ക്കു നീക്കം ചെയ്താൽ എന്തു ചെയ്യും?

ప్రతిభాను కుంభాకరణము ద్వారా ప్రోత్సహించు. ఎందుకంటే శిష్టతను పరిపూర్ణముగా పాటించుటలో
పాల్గొనవలయు.

[illegible]

వై. బాబా లను ఏకైగియు క్రియాత్మకమైన జీవన వ్యవస్థ అని తెలుపుచు వచ్చెను.

మృత్యు నిర్మూలన పరిణామాల వాస్తవాల వాస్తవికత ఎలా ప్రకటితమి?

జీవ్యులను పెట్టే వాటివలన 'మధ్య పూర్వ పద్ధతి' పదార్థాల మార్పిడి జరుగుతుంది.

[illegible]

జీవితమునందు మనమును, మనమును నిరూపించుకొనుము) సమయము

1935 年 1 月 1 日

గణిత శాస్త్రము

మాత్రము

మాత్రము, సమీకరణ మాత్రము, భౌతిక శాస్త్రము, ఇంజనీరింగులలోను, ఆర్థిక శాస్త్రము, సాంఘిక శాస్త్రము మున్నగు శాస్త్రాలలోను ప్రముఖ పాత్ర వహిస్తున్నాయి. భౌతిక, సాంఘిక శాస్త్రములకు మాత్రము, మాత్రాసంబంధము ప్రధాన పరికరాలుగా నున్నాయి. మాత్రమును కాలిక్యులస్ ప్రవేశ శాస్త్రమునందు అంగగణిత శాస్త్రమునందు ఆర్థిక్స్ *Arithmetic* 1821 - 1833 వాస్తవిక సంఖ్యలను అక్షరాలను, నిమిష సమయ బీజగణిత శాస్త్రములో అవయవ అక్షరాలను మాత్రము యిది పరికిన గాదు యె. జె. సిల్వెస్టర్ *J. J. Sylvester* 1814 - 1897 అను అంగ గణిత శాస్త్రము.

ఈ అధ్యాయములో మాత్రము కలు

1. సమాచారాన్ని నిలువ చేసే విధానంగానూ
2. మాత్రములలో వ్రాసిన సమాచార మాత్రము *Algebraic Method* కూర్చున్నాక *Algebraic Method* సంఖ్యల మాత్రము *Algebraic Method* గురించి తెలుసుకొంటారు. మరియు మాత్రము, ప్రక్రియలైన ఎ. మాత్రము సంకలనము. బి. మాత్రము ఒక సంఖ్య చేతను, మరొక మాత్రము చేతను గుణకారము చేయుదుము, ఈ ప్రక్రియలకు సంబంధించిన సూత్రాలు, ధర్మాలు తెలుసుకుంటారు. ఇంకా మాత్రముల సహాయంతో రెండు వరకులలోని సమకరణ వ్యవస్థను సాధించి విధాన గూడ తెలుసుకుంటారు.

1. మాత్రములు, మాత్రముల పద్ధతులు దేనిలో ప్రాముఖ్యత వహిస్తున్నాయి?
- జ. మాత్రములు, మాత్రముల పద్ధతులు గణితము, భౌతిక శాస్త్రము, ఇంజనీరింగులలోను, ఆర్థిక శాస్త్రము, సాంఘిక శాస్త్రము, మున్నగు శాస్త్రములలో ప్రముఖపాత్ర వహిస్తున్నాయి.
2. ఎవరికి ఈ మాత్రము సిద్ధాంతము ప్రధాన పరికరాలుగా ఉన్నాయి ?
- జ. భౌతిక సాంఘిక శాస్త్రము

మాతృకలను కొలిసారిగా ప్రవేశపెట్టిన శాస్త్రవేత్త ఎవరు?

మాతృకలను కొలిసారిగా ప్రవేశపెట్టిన శాస్త్రవేత్త - ఆంగ్లగణిత శాస్త్రవేత్త అయిన ఆర్థర్ కెట్ *Arthur Cayley*

1821 - 1895.

మాతృక అని వేరు వెళ్ళిన మొదటి గణిత శాస్త్రవేత్త వేరెమి?

మాతృక అని వేరు వెళ్ళిన మొదటి గణిత శాస్త్రవేత్త వేరు జె. జె. సిల్వెస్టర్ *J. J. Sylvester*

1814 - 1897 అనే ఆంగ్ల గణిత శాస్త్ర వేత్త.

ఈ ఆధారములలో ఏరకములైన మాతృకలను నేర్పకోబోతున్నారు?

ఈ ఆధారములలో (ఎ) సమాచారం నిలువేసే విధానముగాను (బి) మాతృకలలో రకములైన

సమాచార మాతృక *Information Matrix* మూర్ఖమాతృక *Rank Matrix* సంఘటన మాతృక

Incidence Matrix మరియు మాతృకాపరిమితి *Matrix Rank* మాతృకసూక్తవము (బి) మాతృకను

ఒక సంఖ్య చేతను మరొక మాతృక చేతను గణాకారము చేయుటయు, ఈ పరిమితి సు సుబంధించిన

సూక్తాలు, ధర్మాలు తెలుసుకుంటారు. ఇంకా మాతృకల సనే యంతో రెండు చరణములలోనే

సమీకరణ వ్యవస్థను సాధించే విధానం గూడ తెలుసుకుంటారు.

నిత్య జీవితంలో కొన్ని విషయాలను గురించి సమాచారాన్ని నిల్వ చేసి యుంచవలసిన అవసరం ఉంటుంది. ఉదా: ధరలు, జాబ్ గాలు ఫ్యాషన్ లో ప్రచరించబడటం వచనము కరదగా చూస్తున్నే ఉంటాము.

మూలము: 1. వేర్వేరు రకాల కేయాకు ధరలు రూపాయలలో రక్తిండ్ చూపబడ్డాయి.

	$\frac{1}{2}$ కిలో	1 కిలో	5 కిలోలు
రకము ఎ	20	38	180
రకము బి	25	45	200

1. రకము ఎ 5 కిలో ధర ఎంత?

జ. రకము ఎ కేయాకు 5 కిలోల ధర 180 రూపాయలు.

2. రకము బి కేయాకు $\frac{1}{2}$ కిలో ధర ఎంత?

జ. రకము బి కేయాకు $\frac{1}{2}$ కిలో ధ 25 రూపాయలు.

3. ఒక కిలో రకము ఎ కేయాకు రకము బి కేయాకు కన్న ఎంత ఎక్కువ?

జ. ఒక కిలో రకము ఎ కేయాకు రకము బి కేయాకు కన్న 9 రూపాయలు ఎక్కువ.

4. $\frac{1}{2}$ కిలో రకము బి కేయాకు రకము ఎ కేయాకు కన్న ఎంత తక్కువ?

జ. $\frac{1}{2}$ కిలో బి కేయాకు రకము ఎ కేయాకు కన్న 5 రూపాయలు తక్కువ.

5. 5 కిలోల రకము ఎ కేయాకు, రకము బి కేయాకు కన్న ఎంత ఎక్కువ?

జ. 5 కిలోల రకము ఎ కేయాకు, రకము బి కేయాకు కన్న 20 రూపాయలు ఎక్కువ.

మరియు ఇంకా అనేక ప్రశ్నలకు జవాబులు, తెలుగు, హిందీ, గుజరాతీ, కన్నడ, మరాఠీ, సంస్కృత, పర్షియన్, అరబిక్, తుర్కీ, బెంగాలీ, ఉర్దూ, సింధీ, మలయాళం, తమిళం, వేదములు, శాస్త్రములు, అనువాదములు.

	ఇంగ్లీషు	తెలుగు	హిందీ	గుజరాతీ	సామాన్య శాస్త్రము	సాంఘిక శాస్త్రము
ఆనిక	50	45	25	60	45	70
సుకీర్	60	40	35	70	48	60
గీత	70	35	45	80	62	50

1. ఆనికకు ఇంగ్లీషులో మార్కులెన్ని?
- జ. ఆనికకు ఇంగ్లీషులో 50 మార్కులు.
2. సుకీర్ కు గుజరాతీలో మార్కులెన్ని?
- జ. సుకీర్ కు గుజరాతీలో 70 మార్కులు.
3. గీతకు సాంఘిక శాస్త్రములో మార్కులెన్ని?
- జ. గీతకు సాంఘిక శాస్త్రములో 50 మార్కులు.
4. తెలుగులో ఆనికకు సుకీర్ కు ఎన్ని మార్కులు ఎక్కువ వచ్చెను?
- జ. తెలుగులో ఆనికకు సుకీర్ కు 5 మార్కులు ఎక్కువ వచ్చెను.
5. హిందీలో సుకీర్ కు గీతకు ఎన్ని మార్కులు తక్కువ వచ్చెను?
- జ. హిందీలో సుకీర్ కు గీతకు 10 మార్కులు తక్కువ వచ్చెను.
6. గీతకు గుజరాతీలో ఆనికకు ఎన్ని మార్కులు వచ్చెను?
- జ. గీతకు గుజరాతీలో ఆనికకు 20 మార్కులు ఎక్కువ వచ్చెను.
7. గీత, ఆనిక, సుకీర్ లందరిలో అన్నింటిని కలిపి ఎవరికి ఎక్కువ మార్కులు వచ్చెను?
- జ. గీత, ఆనిక, సుకీర్ లందరిలో అన్నింటిని కలిపి గీతకు ఎక్కువ మార్కులు వచ్చెను.
8. గీత, ఆనిక, సుకీర్ లలో అన్నింటిలో కలిపి ఎవరికి తక్కువ మార్కులు వచ్చెను?
- జ. గీత, ఆనిక, సుకీర్ లలో అన్నింటిలో కలిపి ఆనికకు తక్కువ మార్కులు వచ్చెను.
9. ఆనికకు సుకీర్ కు ఎన్ని సబ్జెక్టులో ఎక్కువ మార్కులు వచ్చెను?
- జ. ఆనికకు సుకీర్ కు 5 సబ్జెక్టులో ఎక్కువ మార్కులు వచ్చెను.
10. ఆనికకు గీతకు ఎన్ని సబ్జెక్టులో ఎక్కువ మార్కులు వచ్చెను?
- జ. ఆనిక కన్న గీతకు 4 సబ్జెక్టులో ఎక్కువ మార్కులు వచ్చెను.

నాటిరి 21

11. సుకృతన్న గోరడు ఎన్ని సప్తక్లో ఎక్కువ మార్కులు వచ్చాయి?

జ. సుకృతన్న గోరడు 4 సప్తక్లో ఎక్కువ మార్కులు వచ్చాయి.

12. సుగర్లో ఎవరికి ఏ ఏ సప్తక్లో విగిలిన ఇద్దరికన్న ఎక్కువ మార్కులు వచ్చాయి?

జ. ముగ్గురిలో ఎవరూ తెలవ, సాంఘికశాస్త్రములో విగిలిన ఇద్దరికన్న ఎక్కువ మార్కులు వచ్చాయి.

గోరడు ఇంజనీరు, టియర్, గోరడు, సాంఘికశాస్త్రములో విగిలిన ఇద్దరికన్న ఎక్కువ మార్కులు వచ్చాయి. పురోహి ఉద్యమ సప్తక్లో కూడ ఇద్దరికన్న ఎక్కువ మార్కులు రావడం.

మాచెరికి ఎక్స్, వెల్, జడ్, లో ముగ్గురు పిదూర్లులు రెండు పరీక్షలలో ఎన్నివ మార్కులు కింద
చూపబడ్డాయి.

	పరీక్ష 1	పరీక్ష 2
ఎక్స్	45	30
వెల్	36	42
జడ్	5	60

1. ఎక్స్, వెల్, జడ్ లను రెండు పరీక్షలలో ఏ పరీక్షలో ఎక్కువ మార్కులు వచ్చాయి?
- జ. ఎక్స్, కి రెండవ పరీక్షలో కన్న మొదటి పరీక్షలోను, వెల్, జడ్ లను మొదటి పరీక్షలో కన్న రెండవ పరీక్షలో ఎక్కువ మార్కులు వచ్చాయి.
2. ఎక్స్, వెల్, జడ్ లలో మొదటి పరీక్షలో ఎవరికి ఎక్కువ మార్కులు వచ్చాయి?
- జ. ఎక్స్, వెల్, జడ్ లలో మొదటి పరీక్షలో జడ్ కి ఎక్కువ వచ్చాయి.
3. ఎక్స్, వెల్, జడ్ లలో రెండవ పరీక్షలో ఎవరికి ఎక్కువ మార్కులు వచ్చాయి?
- జ. ఎక్స్, వెల్, జడ్ లలో రెండవ పరీక్షలో జడ్ కి ఎక్కువ మార్కులు వచ్చాయి.
4. ఎక్స్, వెల్, జడ్ లలో మొదటి పరీక్షలో ఎవరికి తక్కువ మార్కులు వచ్చాయి?
- జ. ఎక్స్, వెల్, జడ్ లలో మొదటి పరీక్షలో వెల్ కి తక్కువ మార్కులు వచ్చాయి.
5. ఎక్స్, వెల్, జడ్ లలో రెండవ పరీక్షలో ఎవరికి తక్కువ మార్కులు వచ్చాయి?
- జ. ఎక్స్, వెల్, జడ్ లలో రెండవ పరీక్షలో వెల్ కి తక్కువ మార్కులు వచ్చాయి.

గణిత శాస్త్రము

(ప్రశ్నోత్తరము)

ఈ విధంగా ఇడ్డువరుసలను, నిలువ వరుసలను సంఖ్యల ప్రదర్శన రూపమును మార్చిక అంటారు.
ఈ విధమైన మార్చికల వనరు సమాచారాన్ని సూచిస్తాయి. అందుచే అడ్డి మార్చికలను సమాచార మార్చిక అంటారు.


మార్చిక ద్వారా సమాచారమును సాంకేతిక రూపంలో రహస్యముగా అందజేయవచ్చును.
ఎ, బి, సి, డి..... షడ్జి అను 1, 2, 3, 4..... 26 లను సంఖ్యలచే సూచించిన, 1, 3, 11, 19, 20
అను మార్చిక ను చూపించును.

1. ఈ విధంగా ఇడ్డువరుసలను నిలువ వరుసలను సంఖ్యల ప్రదర్శనను ఎవరుంటారు?
- జ. ఈ విధంగా ఇడ్డువరుసలను, నిలువ వరుసలను సంఖ్యల ప్రదర్శనను మార్చిక అంటారు.
2. సమాచారాన్ని అందించే మార్చికలనేమంటారు?
- జ. సమాచారాన్ని అందించే మార్చికలను సమాచార మార్చికలంటారు.
3. మార్చిక ద్వారా సమాచారాన్ని రహస్యంగా ఎలా పంపవచ్చు?
- జ. మార్చిక ద్వారా సమాచారాన్ని సాంకేతిక రూపంలో రహస్యంగా పంపవచ్చు.

ఉదా: ఎ, బి, సి, డి..... 2 అను 1, 2, 3, 4..... 26 అను సంఖ్యలచే
సూచించిన 1, 3, 11, 19, 20 అను మార్చిక ను చూపించును.

గణితశాస్త్రము

మార్గములను పేర్కొనవలయును. ఈ దిగవలయునట్లు పాదరాజు, ఢిల్లీ, మద్రాసు అను మూడు ముఖ్య నగరాలను కలుపునూ ఉన్న వేరే రు నగరాలను చూపుచుండి. 1) ప్రదేశాలు పిండువులవలన, వర్షాల బాపముచేతను చూపబడ్డాయని గమనించండి. ఒక బాపము వైనను పిండు సమీపిని కలిపి బాపముల వలనను పల రూపము 2) అంటారు. ఈ సమాచారాన్ని మార్గ ద్వారా ఎలా చూపుతాము? రులు మధ్య దారిలో ఏనగరము గుండాను వలెనని ప్రయాణమారాన్ని direct నేరు మార్గము అంటారు. పాదరాజు నుండి ఢిల్లీ నేరుగా మార్గమున్నదా? పాదరాజు నుండి మద్రాసుకు నేరుగా వలె మార్గాలెన్ని ఉన్నాయి. ఢిల్లీ నుండి మద్రాసుకు నేరుగా వలెనానీకి మార్గమున్నదా?

ఢిల్లీ పాదరాజు

 మద్రాసు

పే సట రూపమునీ సమాచారాన్ని మార్గ ద్వారా ప్రదర్శింపవలయును.
 మార్గముల వ్యాస నిధానము

	పాదరాజు	ఢిల్లీ	మద్రాసు
పాదరాజు	0	1	2
ఢిల్లీ	1	0	0
మద్రాసు	2	0	0

- 1) ప్రతి ఒక్క వరసకును, ముందును ప్రతి నిలువ వరసలవ్వనను నగరాల వేర్వే వాయుండి?
 2) {ఎ} రెండు స్థలాల నేరుగా ఒక మార్గముచే కలుపబడి యుంటే 7 చే సూచించండి.
 {బి} రెండు స్థలాల నేరుగా రెండు మార్గాలచే కలుపబడి యుంటే 2 చే సూచించండి.
 {సి} రెండు స్థలాలను నేరుగా కలిపి మార్గంలేకుంటే -0- చే సూచించండి.

ఈ పద్ధతిలోని విషయాలను ఈ క్రింది విధంగా చూపుతాము

0	1	2
1	0	0
2	0	0

ఈ మార్గ కల

ఎ) మూడు ఆడ్డు వరుసలు, మూడు నిలువ వరుసలు ఉన్నాయి

2) పాదరాజు నుండి పాదరాజుకు, మద్రాసు నుండి మద్రాసుకు ఢిల్లీ నుండి ఢిల్లీకి మార్గాల సంఖ్య 0 చే మార్గకల ముల కర్ణముచే సూచింపబడ్డాయని గమనిస్తాము.

గణితశాస్త్రము

1. మార్గసూక్తిక అంటే ఏమిటి?
2. ప్రదేశాలును కలుపునూర్లును మాపు పద్ధతిను మార్గసూక్తిక అంటారు.
3. వల రూపము అంటే ఏమిటి?
4. ఒక తలము వైపునను బిందుననుగిని కలిపే చాపముల మ్యవస్థను వలరూపము అంటారు.
5. మార్గసూక్తిక వ్యాసములంటే మొదట ఏమి వ్యాసమోహి?
6. మార్గసూక్తిక వ్యాసములంటే మొదట ప్రతి ఆడ్కు వరుసకు ముందు ప్రతి నిలవ వరుసకు ముందు ప్రతి నిలవ వరుసకు ముందు నగరాల్ వర్ష వ్యాసమాలి.
7. రెండు స్థలాలు నేరుగా ఒకే మార్గముచే కలుపబడికే ఏ సంఖ్యచే సూచించాలి?
8. రెండు స్థలాలు నేరుగా ఒకే మార్గముచే కలుపబడికే 1 చే సూచించాలి.
9. రెండు స్థలాలు నేరుగా రెండు మార్గాలచే కలుపబడి యుంటే ఏ సంఖ్యచే సూచించాలి?
10. రెండు స్థలాలు నేరుగా రెండు మార్గాలచే కలుప బడి యుంటే 2 సంఖ్యచే సూచించాలి.
11. రెండు స్థలాలను నేరుగా కలిపే మార్గం లేకుంటే దేనితో సూచించాలి?
12. రెండు స్థలాలను నేరుగా కలిపే మార్గం లేకుంటే 0 తో సూచించాలి.
13. ఈ క్రింది వల రూపము కి కి లను మార్గక రూపంలో వ్యా యుండి

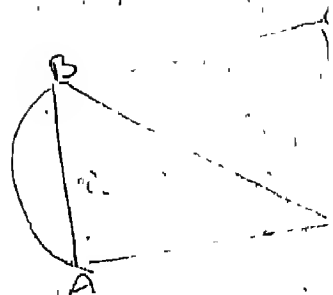
	ఎ	బి	సి
ఎ	0	1	1
బి	1	0	2
సి	0	2	0



1. ఎ నుండి బి కి ఎన్ని మార్గాలున్నాయి?
2. ఎ నుండి బి కి ఒక నేరు మార్గమున్నది.
3. ఎ నుండి ఎ కి ఎన్ని నేరు మార్గాలున్నాయి?
4. ఎ నుండి ఎ కి ఒక నేరు మార్గం కూడ లేదు అంటే 0.
5. ఎ నుండి సి కి ఎన్ని నేరు మార్గాలున్నాయి?
6. ఎ నుండి సి కి ఒక నేరు మార్గం ఉన్నది.
7. బి నుండి ఎ కి ఎన్ని మార్గాలున్నాయి?
8. బి నుండి ఎ కి ఒకే ఒక నేరు మార్గం వుంది.
9. సి నుండి సి కి ఎన్ని నేరు మార్గాలున్నాయి?
10. బి నుండి సి కి రెండు నేరు మార్గాలున్నాయి.
11. బి నుండి బి కి ఎన్ని నేరు మార్గాలున్నాయి?
12. బి నుండి బి కి ఒక నేరు మార్గం కూడ లేదు.

7. సి నుండి సి కి ఎన్ని నేరు మార్గాలున్నాయి?
 8. సి నుండి సి కి ఒక నేరు మార్గం మాత్రం లేదు.
 9. వై. డెస్టిన సంఖ్యలతో మాత్రికను వ్రాయుము?

	ఎ	బి	సి
ఎ	0	1	1
బి	1	0	2
సి	0	2	0



1. వై. వల రూపముతో మాత్రికగా వ్రాయుటకు మొదట మాత్రికకు రూపమును వ్రాయుము?
 మాత్రిక రూపము

	ఎ	బి	సి	డి
ఎ	0	2	0	1
బి	2	0	1	1
సి				
డి				

2. వై. వలరూపమును గమనించి ఎ నుండి ఎకి నేరు మార్గము లేనది వ్రాయుము?
 జ. ఎ నుండి ఎ కి నేరు మార్గము లేదు. కాబట్టి సి వ్రాయవలెను.
 3. ఎ నుండి బి కి ఎన్ని నేరు మార్గాలున్నాయి?
 జ. ఎ నుండి బి కి రెండు మార్గాలున్నాయి.
 4. ఎ నుండి సి కి ఎన్ని నేరు మార్గాలున్నాయి?
 జ. ఎ నుండి సి కి ఒక నేరు మార్గము లేదు.
 5. ఎ నుండి డి కి ఎన్ని నేరు మార్గాలున్నాయి?
 జ. ఎ నుండి డి కి ఒక నేరు మార్గముంది.
 6. బి నుండి ఎ కి ఎన్ని నేరు మార్గాలున్నాయి?
 జ. బి నుండి ఎ కి రెండు నేరు మార్గాలున్నాయి.
 7. బి నుండి బి కి ఎన్ని మార్గాలున్నాయి?
 జ. బి నుండి బి కి ఒక్క మార్గము లేదు.

త్రిప్పి చూడము.

గణిత శాస్త్రము

8. బి నుండి సి కి ఎన్ని నేరు మార్గాలున్నాయి?
9. బి నుండి సి కి ఒక నేరు మార్గాముంది.
10. బి నుండి డికి ఎన్ని నేరు మార్గాలున్నాయి?
11. బి నుండి డికి ఒక నేరు మార్గాముంది.
12. ఈ మార్గాలను మాత్రికలో గమనించండి.
13. వైవిధ్యంగానే సి నుండి ఎ, బి, సి, డి లకు ఎన్ని మార్గాలున్నాయో గమనించి మాత్రికను నింపండి.

వ బి సి డి

0 1 0 1

12. డి నుండి ఎ, బి, సి, డి, లకు ఎన్ని మార్గాలున్నాయో గమనించి మాత్రికను నింపండి.

	వ	బి	సి	డి
వ				
బి				
సి				
డి				

13. ఇప్పుడు మొత్తం పట్టికను వ్రాయండి

	వ	బి	సి	డి
వ	0	2	0	1
బి	2	2	1	1
సి	0	1	0	1
డి	1	1	1	0

14. ఈ క్రింది గల రూపమును మాత్రికలో వ్రాయండి

	వ	బి	సి
వ	0	2	0
బి	2	0	2
సి	0	2	0

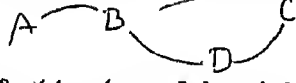


గణిత శాస్త్రము

15. క్రింది పటంలో కొన్ని నగరాలు ఏ విధంగా కలుపబడ్డాయో చూపిస్తుంది. ఈవల రూపమును చూచి ఈ ప్రశ్నలకు సమాధి చెప్పుడి

ఎ. ఈ పట ప్రతిభాగా నేర్చుగా రలచే మార్గం లెకుట్టెం చే సూచిస్తుంది.

సి. ప్రతిష్టా ము ఆదే ప్రభేతముకో కలుపబడి వుంటే చే సూచించండి.



ఇప్పుడు ఈ క్రింది ప్రశ్నలకు జవాబిస్తూ మార్కికను పూర్తి చేయుడి

1. వాచ్ - వెబ్ లో కలుపబడి వుంది.

బి రలుపబడి వుంది.

సి. ఇంకా ఏమి సూచించాలి?

డి. ఒకటి సూచించాలి.

3. వాచ్, బి లో కలుపబడి వుందా? వెబ్, బి లను ఏం సూచించాలి?

4. వెబ్, సి లో కలుపబడి వుంది, కావున ఒకటి సూచించాలి.

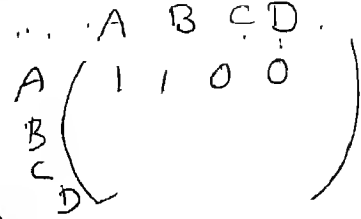
5. వాచ్, సి, కు ఏం సూచించాలి?

6. వాచ్, సి, లకు ఏం సూచించాలి.

7. వాచ్, డి, లకు ఏం సూచించాలి?

8. వెబ్, డి, లకు ఏం సూచించాలి.

9. ఇలాగే మిగిలిన పరస్పరం పూర్తి చేయుడి

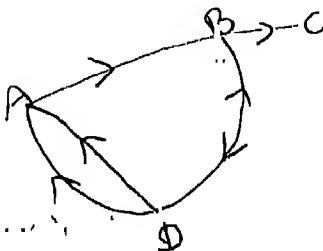


	వాచ్	బి	సి	డి
వాచ్	1	1	0	0
బి	1	1	1	1
సి	0	1	1	1
డి	0	1	1	1

16. ఈ కు గున్న చేరు మార్గం మార్కికను నివరించే వల రూపమును చూపించండి?

1	0	0
0	1	0
0	0	1

17. ఈ ప్రకృత చూపబడిన నేరుమార్గం మార్కిక నివరించే వల రూపం చూపండి



	A	B	C	D
A	0	1	0	0
B	0	0	1	1
C	0	0	0	0
D	2	1	0	0

క్రిస్టిమామను . . .

క్రింది పటములో ఎ, బి, సి, డి, ఎక్స్ గనే సమీక్షిసి చూస్తున్నాము. ఇందు కొన్ని బిందువులు
మీగిరిన వాటి గో సరేఖయ్యాయి కావు. ఈ సమాచారాన్ని సంఘటన మాత్రిక ద్వారా చూపిస్తాము.

ఎ బి
సి

డి డి

ఎ. అడ్డవరుసలో రేఖలను, నిలువ వరుసలు ఆ రేఖలనున్న బిందువులను సూచిస్తాము.

డి. ఒక బిందువు ఒక రేఖపై వుంటే, అవన్నీ లేకుంటే ఏ అని వ్యాప్తము.

1. సంఘటన మాత్రిక అని దేనినంటారు?

జ. రెండురేఖలు ఒక దానినొకటి కలిసినప్పుడు కొన్ని బిందువులు సరేఖయ్యాయి, కొన్ని బిందువులు

సరేఖయ్యాయి కావు. ఈ సమాచారాన్ని తెలికే మాత్రికలను సంఘటన మాత్రిక అంటారు.

2. సంఘటన మాత్రికలకు ఒక ఉదాహరణనివ్వండి?

ఎ బి
సి డి

ఈ పటములోని బిందువులను, రేఖలను ఈక్రింది విధంగా గుర్తింపవచ్చును.

	ఎ	బి	సి	డి	ఎక్స్
ఎబి			○	○	
ఎ, క్స్			○	○	
సి, బి			○	○	
సి, ఎక్స్	○	○			
ఎక్స్, డి	○	○			
సి, డి	○	○			

గదితశాస్త్రము

1. ఎ, బి రేఖవై ఎ బిందువు వుందా?

జ. ఎ, బి రేఖవై ఎ బిందువు వుంది.

2. ఎ, బి రేఖవై ఎ బిందువుంటే ఏం సూచించాలి?

జ. ఎ, బి రేఖవై ఎ వుంటే । తో సూచించాలి.

3. బి బిందువు ఎ, బి రేఖవై వుందా? దేనితో సూచించాలి?

జ. బి బిందువు ఎ, బి రేఖవై వుంది కాబట్టి । తో సూచించాలి.

4. సి, డి బిందువులను ౦ తో సూచించాలి?

జ. సి, డి బిందువులను ౦ తో సూచించాలి ఎందుకంటే అవి ఎ, బి రేఖవై లేదు కాబట్టి.

5. ఎక్స్ బిందువును దేనితో సూచించాలి?

జ. ఎక్స్ బిందువును । తో సూచించాలి ఎందుకంటే అది ఎ, బి రేఖవై వుంది.

6. ఎ, ఎక్స్ రేఖవై వున్న బిందువులను, లేని బిందువులను గుర్తించుము?

జ. ఎ, ఎక్స్ రేఖవై ఎ, బి, ఎక్స్ బిందువులు వున్నాయి. సి, డి లు లేవు.

7. ఎక్స్, బి, రేఖవై ఏ బిందువులున్నాయి? ఏవి లేదు?

జ. ఎక్స్, బి, రేఖవై ఎ, బి, ఎక్స్ లు ఉన్నాయి. సి, డి లు లేవు.

8. సి, ఎక్స్ రేఖవై ఏ బిందువులు ఉన్నాయి? ఏవి లేవు?

జ. సి, ఎక్స్ రేఖవై ఎ, బి బిందువులు లేవు. సి, డి లు ఉన్నాయి.

9. ఎక్స్, డి, సి, డి, రేఖవై ఏ బిందువులు వున్నాయి?

జ. ఎక్స్, డి, సి, డి, రేఖవై సి, డి, ఎక్స్ బిందువులు వున్నాయి. ఎ, బి బిందువులు లేవు.

STUDENTS' BIO - DATA

1. Name :
2. Class :
3. Age :
4. Mother Tongue :
5. Degree of hearing loss :
6. Type of hearing loss :
7. On set of hearing loss :
8. Speech problems :
9. Parents Education :
Father :
Mother :
- 9(a). Parents Occupation :
Father:
Mother:
10. Income :
11. Siblings & their Educational status :
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
12. Caste :
13. Other instances of hearing loss in the family :
14. Achievement level in the class :
 1. Telugu
 2. Science
 3. Social
 4. Maths
15. Age of Sending school :
16. I.Q. :

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